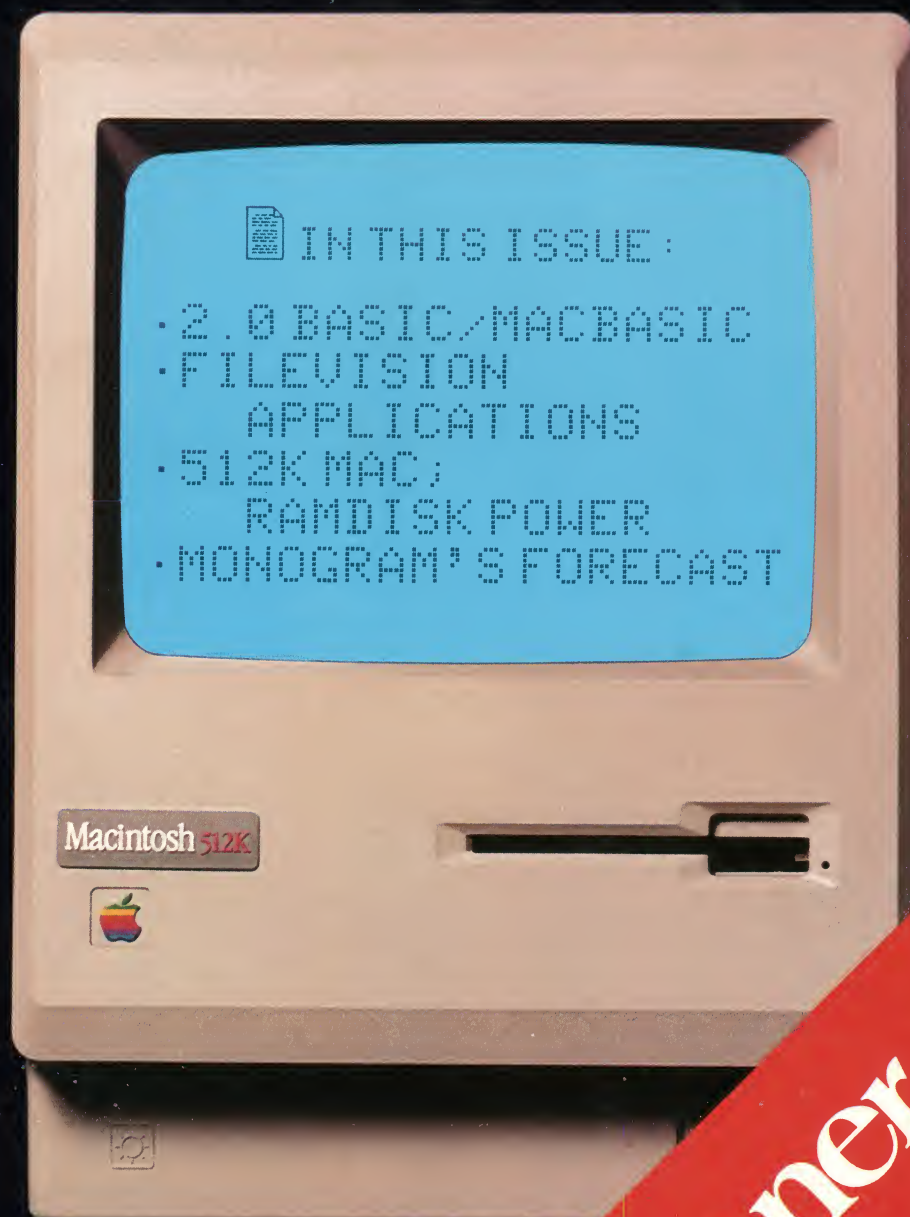


# THE **MACazine**



 IN THIS ISSUE:

- 2.0 BASIC/MACBASIC
- FILEVISION  
APPLICATIONS
- 512K MAC;  
RANDISK POWER
- MONOGRAM'S FORECAST

Macintosh 512K



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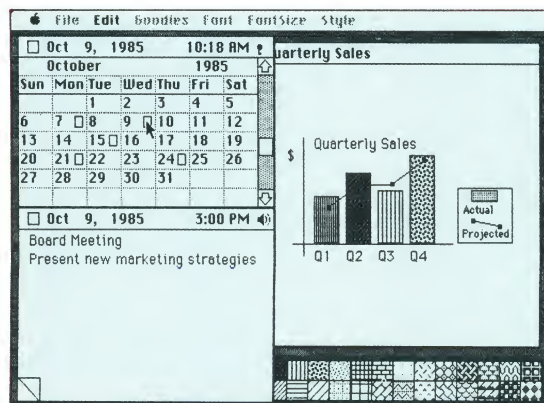
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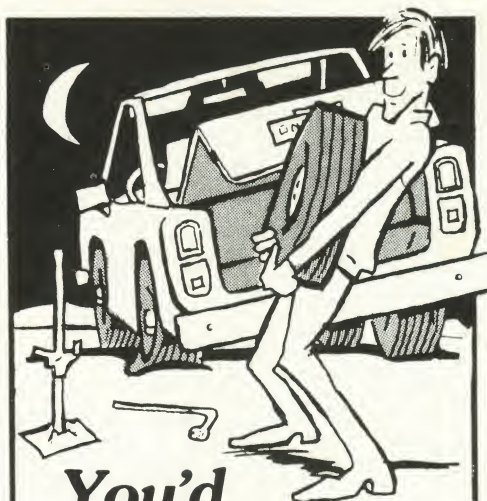
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# THE **MACazine**

A monthly magazine for Macintosh users

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Asst. Art Directors Melodie McDonald,  
Espey, Huston & Associates, Inc.,  
Austin, TX  
Dana Mardaga,  
Espey, Huston & Associates, Inc.,  
Austin, TX

Printing Hart Graphics, Inc.,  
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the Southwest  
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POSTMASTER: Send address change to The MACazine, P.O. Box 1936, Athens, TX 75751.

PAID SUBSCRIPTIONS: \$24 per year. Special rates for schools and libraries.

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# PERSPECTIVE

This third issue of The MACazine, "the magazine for the rest of us," seems a most appropriate place for us to express our thanks and appreciation to all of you who, through your support, have helped us "over the hump" which was our first three issues . . . thanks to all of you, subscribers, dealers, developers, and advertisers. The MACazine is more than just a "survivor"! We've managed to get 50,000 copies per month into the hands of Macintosh owners, and have been gratified by your response . . . subscriptions have mushroomed, dealer orders have steadily increased, developers have provided a great deal of moral support and cooperation, and advertisers, though understandably tentative in the wake of ST. Mac's demise, have begun to increase their commitments to our fourth and subsequent issues. We thank you all!

Hopefully, by now, most of you have noticed that we're changing from issue to issue as we seek to offer more (and better) of the editorial material for which you've told us you buy The MACazine. We said initially that we'd be responsive to your desires, and we've honored that promise. Your input and suggestions are always appreciated.

Our second issue introduced Pam Roth's new "Mac Business" feature column which will focus on Macintosh business issues and applications. That same issue introduced Charlie Jackson as our new steward of the M.U.G. Shots/User Group feature, and Bob Jacobs as editor of our Developer Profile column . . . we're glad that you liked the Chip-Wit!

This issue marks Eric Zocher's debut as our resident Question & Answer guru, and introduces Allen Munro's new monthly Filevision applications column . . . the first of several regular columns which are being developed for users of certain other software packages which we believe to be so unique that they merit an ongoing, in-depth monthly forum. We will be introducing these columns in our next three issues.

Finally, in our next issue, Neil Shapiro (Compuserve M.A.U.G.'s Neil Shapiro, himself) will introduce his own monthly column featuring everything from the "M.A.U.G. and more" to personalities, to product reviews, to whatever strikes his fancy . . . and yours.

And there's lots more "in the works" which is scheduled to appear as increased advertising revenues enable us to expand The MACazine to twice its present size . . . hopefully by late spring! But it won't happen without your continued support . . . if you haven't yet subscribed, we hope that you'll do so now, or that you'll ask your dealer to stock The MACazine for you. It's also important that you let both your dealer and developers know what you think of our publication . . . as well as where you heard about the software and hardware products which you purchase . . . hopefully, that'll be The MACazine . . . for years to come!

John D. Buquoi



# Copyright Problem with Digitizers?

By Pamela J. Roth

## An Investigation

The conversation went something like this:

Digitizer: Hmmm, what are the implications?

Digitizer?

*You know*, the widget you attach to Macintosh and aim at text or photographs.

Yeah, then what?

Amazing things occur -- the image is transferred to a MacPaint or MacWrite document depending on the particular device.

You mean any picture or article or part of a book?

Exactly.

Modern technology. What will come next?

Yes, but think of what it means today . . .

What does it mean?

Well, the first thing you think about is copying text and pictures directly into a document, database, spreadsheet, and anything else you can think of.

Is it anything like using a copy machine? And isn't copying illegal if you don't have permission?

Hmm, let me think about it and I'll get back to you . . .

So I thought about it, looked at marketing literature for Omni-Reader by Oberon International, MicronEye by Micron Technology, Inc., and ThunderScan by Thunderware, Inc., dug out the case book I used in the copyright course I took in law school, reviewed the copyright code and recent cases, and talked with Macintosh enthusiasts and a couple of friendly neighborhood attorneys who concentrate on computer law.

The copyright code describes what can be copyrighted, copyright notice and registration, who owns a copyright, how to transfer a copyright, rights of copyright owners, length of a copyright, penalties for infringing copyright, and the copyright office among other related topics. The code describes of something called the *fair use doctrine*, which among other things says that educational institutions and nonprofit libraries or libraries open to the public can make one copy of copyrighted material without permission of the copyright owner as long as they do not discourage sales by producing and distributing several copies from an original. An intent of the fair use doctrine is to recognize situations in which the purchase of copyrighted material would not occur. For example, it's ok for a library employee or library user, without the permission of the copyright owner, to reproduce a three-paragraph copyrighted article from a volume of an encyclopedia as long as the reproduction becomes the property of the user and is not circulated.

However, it is sometimes difficult to draw the line: how many paragraphs or pages constitute a legal copying? In situations where the copying is planned and discourages the purchase of the original it is easier to find an infringement. Under no condition can a library system or educational institution enter into an agreement with branches of the system to reproduce copies of documents, photographs, records, videotapes, or software that it will provide throughout the system. Although it is done regularly, the mass reproduction and distribution of articles used in a course, even if the price only covers printing and distribution costs is an infringement of the copyright, unless of course, permission has been obtained from the copyright owner.

Now change the scenery—out of the educational and public institutions into private institutions. Picture a floor of a modern office building. Cool colors to calm the anxiety that comes with a typical fast-paced day. Glass offices around the edge, panelled cubicles in the middle. Imagine it's the department you work in. The



mail arrives with several issues of the various magazines and journals that the department subscribes to. The administrative assistant opens a drawer and pulls out several swatches of paper with the names of the department staff. Everyone knows the rule: cross off your name when you are finished reading the magazine and pass it to the next person.

When the various periodicals come across *your* desk, you suddenly find time to take a break and check out your favorite columns or that article you had advance notice of. An author or editor makes a good point, but instead of jotting it down on a piece of paper, which would probably get lost or make no sense out of context, you casually saunter over to the copy machine, taking several other things you need copies of. And, voila, whether you know it or care about it, you have infringed the copyright law, that is, the rights of the copyright owner. What's that you say? You only copied one for yourself for your private library and you wouldn't have bought a copy yourself anyway? Sorry, the copyright law does not work that way. You are not an educational institution or public library. Hold that thought.

Remove the copy machine and replace it with a digitizer, or simply add a digitizer to the collection of machines. Now the information is being directly sent to a computer document, which is stored and printed or viewed when needed. Is there an infringement? Yes, if there is unauthorized copying.

Add a new element: instead of the "innocent" who makes one copy for his or her private, although non-institutional library, suppose the owner of the digitizer publishes a magazine or a newsletter, or is a consultant who collects and distributes information to clients. We're now talking about commercial use of information on a grand scale. This is getting serious; if the publisher borrows without permission, then we're talking not only about tremendous amounts of unauthorized copying, but plagiarism as well. (Bear with me, as a writer who is required to trust the honor system, I cannot believe there are enough dishonest people that it will become impossible to earn my keep by the activity I do best and love most, not necessarily in that order.)

New question comes to mind—does this mean that manufacturers, wholesalers, and retailers are at fault for creating and distributing a product whose purpose is to copy material thereby infringing the rights of copyright owners and that they should be enjoined from producing and distributing the product as well as be required to pay damages for lost revenue and additional punitive damages for severe wrongdoing? At first glance, it might appear so. However, a closer examination shows why the answer is NO.

So far we have only looked at the negative aspects; there are many uses for digitizing equipment that do not infringe copyright, including entering information produced by an incompatible system, raw data collected from interviews or other research, sales orders, or typed drafts, letters, or memos. And, then there's the case law, particularly the *Betamax* case, which was brought by copyright owners of films shown on television viewed in households across the country who felt that the production of the machine constituted contributory copyright infringement. As Allen R. Grogan succinctly presented the outcome in his article, *Implications of the Betamax Decision in the Computer Software Industry* in **The Computer Lawyer**, volume 1, number 1, March 1984.

Balancing the interests of copyright owners in protecting their statutory monopoly against the interests of others to engage freely in unrelated areas of commerce, the Supreme Court held that the sale of copying equipment would not constitute contributory copyright infringement if the

equipment is capable of "substantial noninfringing uses."

This decision applied only to the use of the betamax in the home and did not consider the transfer of the copy made, the production of additional copies from the copy, or copying of films and programs transmitted on pay or cable television. Strictly speaking, home use does not fall under the fair use doctrine, nevertheless, this decision must be read as an interpretation of the fair use doctrine as it applies to educational and institutional copying. However, since in business use there are substantial noninfringing uses of a digitizer, it can be reasoned that the manufacturers could not be convicted of contributory infringement.

So you say: if unauthorized copying with a digitizer is an infringement just as unauthorized copying with a copy machine or any other means, but there is no solution in the courts, what is to be done to protect against unauthorized copying? In recent months, Lotus Development Corporation has shown they are serious by suing users of 1-2-3 who choose to ignore the licensing agreement, including Rixon, Inc. and Health Group, Inc. Lotus 1-2-3 is a very successful product with the potential to earn much more for its developer. Which is why Lotus is not just suing to make a point, they are suing to protect the potential to earn additional income. A developer of a less successful product might not have the incentive, as well as the money, to protect its copyright.

Apply the loss of revenue theory to copyrights in magazines, articles, journals, books, and photographs. Unfortunately, the motivation by publishers of books and photographs to sue is nowhere as great as those of the film industry or the software industry. As a matter of fact, as one attorney suggested, the incentive could be greater not to sue, because the greater the income the more royalties the publisher must pay to the writer or artist. Once a publisher has collected enough to cover costs and make a reasonable profit, the incentive is to go on to new projects and minimize the administrative costs of old contracts.

Now, let's look at reality and individuals. What percent of the owners of digitizers will use it to infringe copyrights and at what level? I suggest the percentage will be low. The introduction of the digitizer is merely another step, just as the copy machine and then betamax.

Nevertheless, what about writers and artists who have sold their rights to publishers? Neither the copyright code nor education about the value of creativity in a free society is enough, but that's what we have. The truth is, we have yet to come up with a solution. Digitizers add to the problem, but prohibiting society to benefit from technology is worse. No manufacturer could afford to bring a product to market if it risked a suit every time it tried. That would be the beginning of the end of creativity and a free economy.

One last imaginary trip—a glance into the future when books and photographs will be sold the way software is today with the ability to make only one copy on disk. Will books disappear? Could be, but don't worry, it won't happen until the standard computer is small enough to curl up with in a comfortable chair. Otherwise, no one will buy them. We won't buy them. You see, we have the answers and the power to make the difference. And, who are we? Consumers. We don't need to steal.

Do we?

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# MAC-MAIL

Dear Sirs,

I read with interest about your publication in the August issue of St. Mac. I have been the owner of an Apple Macintosh for 5 months now and would appreciate some information on how to go about subscribing, and receiving your newsletter by airmail.

I am particularly interested in getting some Mac public domain software, either from clubs, or that which exists on your Source or Apple Bulletin Boards. I would upload these to our own equivalent of the Source, The Australian Beginning, for the benefit of other Mac owners here in Australia. If you can help me out with this, I would be grateful.

Also I am keen to correspond with Mac users in the U.S.A., so I would be grateful if you passed my name and address to anyone you think would be interested.

Yours sincerely,  
Karl Rasmusson

P.O. Box 5449  
Toowoomba 4350  
AUSTRALIA

Dear "Letters",

Just picked up a copy (December) of THE MACazine—and it was at a propitious time, indeed!

In your MACMail feature, there was a reference to some up-and-coming MACPLOTS—plotter software for MacDraw—as mentioned by the author (?)—a W. L. Stanley, Jr.

As an Apple II owner since 1979, a Macintosh owner from Day One, an architect & author of ClickArt™ Letters, I am interested in pushing the Mac as far as possible into the realm of CADD! Thus my interest in

MacDraw plotting capabilities!

In conversation with folks at Apple, I had heard that there was a product available in England—and one from someone on the East Coast. Could it be that your W. L. Stanley, Jr. is the "someone" on the East Coast?

Either way, I would appreciate your forwarding this letter to W. J. Stanley, Jr. or better yet, send *me* his address so that I might contact him directly.

As always, I'm afraid that even if plotter software is available, the price of a good plotter will be at least 3 times the cost of the Mac! (Any news to the contrary?)

Thanks,  
R. B. Sprague  
Portola Valley, CA 94025

Dear Macazine,

I must admit, your first issue is better than I expected, so here's my 18 bucks to extend for a full year after my four St. Mac freebie issues. But—there's always a dreaded "but"—you have room for improvement. I *strongly* suggest that you structure your software and hardware reviews in the same format as a magazine called The Absolute Sound, which is far and away the best magazine devoted to audiophile hi-fi equipment. First, they have somebody *experienced* review a product. Leave amateur reviews for the letter column. Only someone who knows enough to really put a product through its paces can uncover both the merits and defects of a product. It is not enough to simply run a few simple tests and then regurgitate the manufacturer's sales literature,

which seems to be a tendency in most computer magazines when rah-rah enthusiasm overwhelms thoughtful analysis. Second, they ask *another* experienced person to comment on the review, which is wonderful for pointing out which elements of a review may be based on subjective considerations (e.g., was the reviewer evaluating software for a specific task and ignoring others?) or objective facts (e.g., both agreeing a certain shortcoming exists). Finally, they ask the manufacturer to comment on the review, which is terrific for seeing what defects they concede and what they are doing about them. Sometimes a manufacturer takes exception to a reviewer's criticisms and points out errors a reviewer made. By having review, comment and rebuttal all printed together, the reader acquires the basis for making an informed judgment. Readers can then pursue an issue in subsequent letter columns.

When things calm down at your office, I think you'll find this type of review format can be implemented without interfering with your publication scheduling. I urge you to consider it.

Finally, I'm sure all readers would agree that comparative reviews are the most useful of all, but they should be in addition to, and not in place of, in-depth single product reviews.

Best wishes for success!

Neal Milch  
New York, NY 10023  
(We agree and are reviewing our review format. Watch for changes in future issues. Ed.)



Dear Sir,

Enclosed please find attached my old mailing label from *St. Mac* magazine. I wish to take advantage of the four complimentary issues that you are offering in the "Perspective" section of your December 1984 issue.

Just a sidelight. I'm writing this using the new MacWrite Version 3.4 and find some of its new features interesting. I have already taken advantage of the "six lines/inch", and extended number of pages while developing a form for my agency.

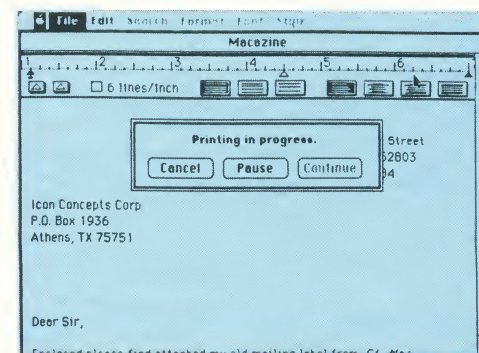
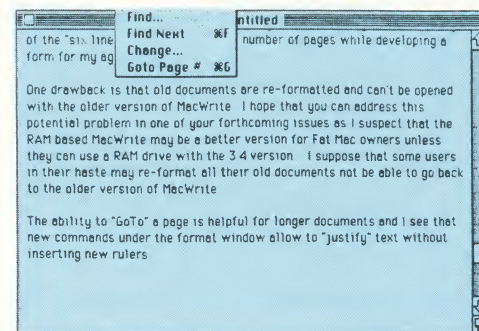
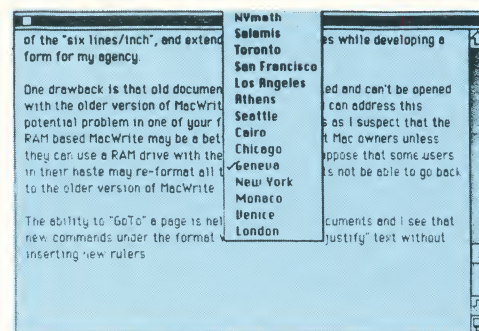
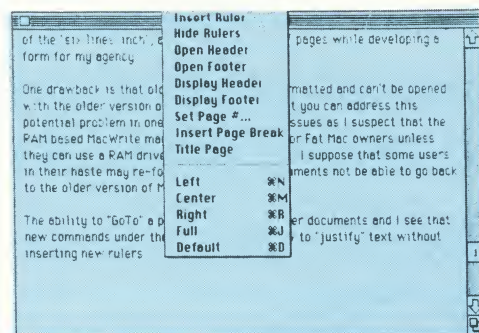
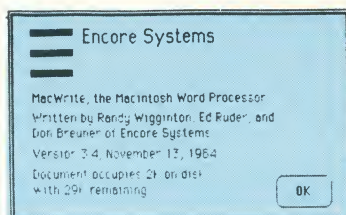
One drawback is that old documents are reformatted via a window that pops up that does not allow the user to cancel the operation. My short experience with the program shows that new MacWrite 3.4 documents can't be opened with the older version of MacWrite. I hope that you can address this potential program in one of your forthcoming issues as I suspect that the RAM based MacWrite may be a better version for Fat Mac owners unless they can use a RAM drive program with the 3.4 version.

I suppose that some users in their haste may reformat all their old documents only to find later that they are not able to go back to the older version. One simple solution is to save copies of the original versions of the documents but at the cost of disk space. Another answer may be cutting and pasting new documents into files that were created under the old MacWrite. What price progress?

As you might expect this disk based program really grinds the drives and some operations seem sluggish compared to the RAM based MacWrite. But none of the operations seemed unreasonably slow when weighed against the added features of the program.

One bug showed up when I attempted to edit the end of this document. It was as if I had used the entire character buffer and the drive containing the program could not keep up with even the shortest editing selections. After 90 seconds of this I hit the interrupt button. I was able to reconstruct the bug twice before giving up. Luckily I had taken the precaution of saving my document so it was still there when I re-booted. In all fairness I'm not sure if I have the released version of the new MacWrite. But then again being an early purchaser of the Mac I have seen some strange problems that took time to iron out via finder and software updates.

The ability to "GoTo" a page is helpful for longer documents and I see that new commands under the format window allow to "justify"



text without inserting new rulers. Also useful is the page number that appears in the scroll box that is continually updated as it is dragged by the mouse.

While printing I also discovered a window that allowed me to pause not just cancel the operation. At last I can answer the phone in my office without the Imagewriter beating time to my conversation.

Sincerely,  
Bill Hennan  
Davenport, Iowa 52803

Dear Folks,

You have a good start on a good magazine. I particularly appreciate the reports culled from colleges and users' groups, and the impartial reviews—more, please! And the MacPaint animation idea (p.17) is the best MacPaint trick I've seen yet.

Keep up the good work,  
Glenn Goodrich

Dear MACazine,

Hello, I have been a subscriber since the second issue of "Iconcepts" was published and have been favorably impressed with the growth of the newsletter into the "MACazine" format. I am a graduate student in Computer Science at the University of Idaho. I appreciate your use of reviewers from diverse backgrounds in the software reviews; hopefully, future issues will also begin to explore the offerings of the hardware "aftermarket."

With the Macintosh, it is easy to be impressed by new features in software packages utilizing the Macintosh user-interface and graphics. It is also very easy to be blinded by them. Too many reviews I have read about Macintosh software have been glowing, uncritical, and touted as the solution to most of the world's computing problems. I would like to express my appreciation to John Venable for his reviews of Habadex and Filevision in the December issue of the MACazine. His reviews provide a balanced view of the software packages, raves where they are deserved, and well-placed blows where they are necessary. I think many readers will agree: we've had enough hype, we need more "beef."

I would also like to offer some of my experiences with a software package for the Macintosh, Macin-



tosh Pascal. Although previews of MacPascal have appeared in many places, there are a number of things that should be made known to prospective purchasers.

First of all, MacPascal is copy-protected. *Completely* copy-protected. The copy protection scheme employed does not allow the making of a "slave" copy, as with some of the Microsoft products where the Master Disk is only inserted when the Mac is booted. Although I have not had any problems with disk crashes, I still feel a little queasy about making full use of the MacPascal toolbox calls knowing that I may not be able to recover if I cause data on my disk to be wiped out. For backing up my own work, individual data and program files are copied to other disks.

The debugging capabilities of MacPascal are nifty. The instant and observe windows are invaluable to a person either learning Pascal, or learning new concepts and implementing them in Pascal. When running a small program, MacPascal keeps track of which variables you want to observe in memory. Each time the program execution hits a stop sign or is single-stepped, the observe window is updated instantly. Nifty.

Still, I have found that the observe window can sometimes get on my nerves. When running a large program, things slow down significantly. Apparently, there is no more room in memory to keep track of the variables to be observed. Each time the program is stopped or single-stepped, MacPascal has to go to disk to find out which variables it should be displaying in the window. For example, to display ten variables in the observe window, it takes five seconds, sometimes longer, to display the values of the variables each time the program is single-stepped or stopped. This may not sound like too long to wait, but it gets tiring after a while to single-step the program through a loop to see where the values are going. Although I haven't had the opportunity to try it on a Fat Mac, I presume there would be instant updating when using the observe window, even with fairly large programs. The maximum size of MacPascal programs will vary depending on the declarations made in the program, but the upper-limit is close to 500 lines or so in my experience.

While running programs, I have run into two bombs and one aggravating instance. Although I am not sure where the bombs occurred exactly, I did narrow it down to a few general areas. The first one was obscure; the interpreter would bomb every time I tried to define a global variable at the beginning of a procedure body, but only while there was a packed-array typed variable in the parameter list. There didn't seem to be any correlation between that particular variable definition and the parameter list, but changing the parameter to a different type and passing a variable of the new type seemed to eliminate the problem. The second bomb occurred when I was running a time-consuming sort routine with the library function, tickcount, in operation. ("Tickcount" is a function which returns real-time ticks of a 1/60 second clock.) This only happened once, and running the same program again seemed to bypass the bug.

The aggravating instance I mentioned has happened a few times when running large programs. Occasionally, a dialog box with a message appears saying "Sorry, Out of Memory." There are two buttons available in the dialog box, "Exit" and "Save." *Sometimes*, the "Save" option is disabled, leaving "Exit" as the only option, launching me into the Finder and my most recently changed program file into the wind! This has occurred a number of times in two different situations: 1) When I ran the program and there was not enough room to make space for all the variables I had declared; 2) When I tried to paste a portion of another procedure into my current program when it would not have fit due to lack of memory.

Mind you, these were both situations in which memory was almost full. When disabled, the "Save" button's letters appear only in gray, just as the "Cut" or "Copy" items appear in the edit menu in MacWrite when nothing is selected to have the operation performed upon. When dealing with slightly smaller programs, the "Save" button is enabled, allowing me to save the program and make changes to it. This is another lesson in the importance of saving files often. (But how many more times would it have happened without the Mac?)

In the MacPascal package I have (version 1.00), there was included with the manual an errata sheet, to update the changes to the manual that occurred after the manual went to press. There are some features shown in the manual which are "deleted" by the errata sheet. Some

of them I felt were significant:

- 1) The declaration of records, files, and sets as "packed" is not permitted. Packed arrays are allowed, but only the following component types are actually stored as "packed": character, 0.255 (unsigned byte), and -128..127 (signed byte).
- 2) Only one level of variant nesting is allowed.
- 3) Procedure and function parameters are not allowed; in other words, the names of procedures and functions may not be passed as parameters to other procedures or functions.
- 4) The device "modem:" is not supported by the writein procedure, as suggested by the "Hands-On Macintosh Pascal" article in the December issue of the MACazine (p. 59).
- 5) When using dynamic variables, the "dispose" procedure does not allow the space allocated to the variable to be reused in the program, if more space is desired.

These differences may or may not be important to the prospective buyer, but they are things that should be at least mentioned. On a more upbeat note is the inclusion of some extra procedures for accessing the toolbox routines, which brings us to another topic.

MacPascal provides the programmer with lots of Quickdraw routines to play with. The Technical Appendix included in the documentation includes a reproduction of Apple's *Quickdraw: A Programmer's Guide*. It provides all kinds of information on how to use the Quickdraw routines and things like GrafPorts, Regions, and Pictures. Also included is documentation of the *In-Line* facility, which provides a way to access any toolbox routine, if you know how to use them. There is a lot of information in the appendix if anyone is interested in learning how to use Quickdraw or wants to learn how it works. You come to the realization, after reading through the appendix, that MacPaint *is* Quickdraw in action.

Along with my gripes I should also say that MacPascal, in all other respects, is a professional piece of work. It runs smoothly and gives you that "feel" which makes good Macintosh software, like with MacPaint and MacWrite, a pleasure to work with. Since this is the first release of MacPascal, I am not dissatisfied with the package because of the few bugs that have appeared.



Lastly, I think there should be some sort of standard recognized by programming language developers when they advertise the level to which the Macintosh toolbox routines are supported. By reading the reviews and advertisements, I was led to believe that MacFORTH by Creative Solutions, Inc. supported the toolbox routines to a much greater extent than MacPascal did. But what I found out was surprising: MacFORTH level 1, although providing easy access to menus and windows, does *not* provide as extensive support of the Quickdraw library as MacPascal does, let alone the reprint of the Quickdraw documentation found in the MacPascal technical appendix. To get more advanced graphics capabilities, the level 2 package is required.

It is this variable that makes me wonder what I might be getting when I see the advertisements in the magazines—"Access to virtually all Mac ROM routines," "Full access of Macintosh toolbox routines," "Access to selected toolbox routines," etc. Here is where the importance of the software review comes in. If the reviewer simply states that the package allows access to certain routines, it may not give the smart consumer all the information needed to make a decision. Worse, a "rave" review can sometimes be more interested in telling how great the package is, and skip some of the important details.

Let me add my request to Gerald Burns' request in the December issue of the MACazine for some reviews of the new "C" compilers. Off the top of my head, I seem to recall that there are at least five being advertised now; a comparative review would be very useful.

Sincerely,  
Jim Moy  
Moscow, ID 83843

*(Jim—Thanks for the "article"; we appreciate your comments and expect them to be of interest to our readers. Ed.)*

Dear Macazine:

I just read in your premier issue that you're giving 4 month subscriptions to people who had unfulfilled St. Mac subscriptions. Enclosed find my St. Mac mailing label.

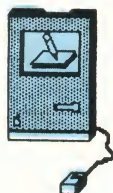
I'm the head of and the newsletter editor of the Eugene Mac User's Group. I also teach Mac classes at the University of Oregon and am

part of the group of people working on our University Apple consortium deal. We haven't moved as many machines as Drexel but we've got a tight, enthusiastic group of users forming and they'll eventually merge with the user's group mentioned.

We've also got a university BBS with free access. It's on a DEC 10 mainframe which is a time-sharing system but it works well and keeps sysop responsibilities off of individual Mac users.

We'd be glad to update you on our User's group's progress (send you our newsletter) and on the university consortium situation here in exchange for a complimentary user's group subscription to the Macazine. We'll also send you information on how to get on our BBS if you like.

The Eugene Macintosh/Lisa User's Group  
P.O. Box 10988  
Eugene, OR 97440



Thanks,  
Richard Wanderman  
Eugene, OR 97401

John:

The premier issue of MACAZINE was great! I hope that you do take up where ST.MAC left off. I had just mailed in my Lisa 2 serial number and was waiting to get on their list when they folded. I did send for all of the back issues, so at least I have everything they published. I feel that your magazine is quite informative, and hope to see more of it. I am a software developer here in Austin, and I also write articles on the Macintosh and Lisa. I have sent you an article that I have been working on about the utility FEDIT. I am also working on an article on using MultiPlan as a database program that I think you will find interesting, and should be finished with by the end of December. I am fairly active in the River City Apple Corps, as well as the University Macintosh User Group here at the University of Texas here in Austin. I notice that you publish hints and shortcuts on the Mac, so I am sending you one that has been going around here.

**A disk can be made into the start-up disk by holding down the option and command key simultaneously and double-clicking on the Finder icon. There is a small utility application circulating from MAUG on Compuserve called MAKE STARTUP that is no longer needed thanks to this bit of information. I had been storing that utility on many of my system disks until I found out about this. Now all you have to do is open the system folder and load in that disk's system as the startup with this method.**

I have also sent along printed out copies of a series of FILEVISION templates that I am marketing. I gave a talk at the December meeting of the UMUG here in Austin, and showed these as transparency slides while giving a rundown of FILEVISION capabilities as a database. I have named the product KNOWLEDGEDISKS, and the first one that is now available has six interactive, educational templates that run under FILEVISION. They are hierarchical in nature, in that at the top of the tree is the Periodic Chart of the Elements, and other templates are linked to, for further information concerning different aspects of chemistry. The first disk contains the Periodic Table in two different forms, and 4 other templates covering BioChemistry. These include The DNA Chain, The RNA Chain, and the Constituents of DNA and RNA. All of these templates work on a 128K MAC, and require FILEVISION. The price is \$24.95 and they may be ordered from the following address:

ExperTech  
4512 B Speedway Drive  
Austin, Texas 78751  
(512) 451-4269

Thanks for the great new source of Macintosh information.

David B. Alford

*(David—Thanks for the kind words, the tip and the FEDIT program—we'll look forward to the MultiPlan article. Ed.)*

Dear MACazine:

I never thought I, as a Typical End User, would ever write in favor of copy protection. However, after reading Mr. Vickers' article against same in your December issue, I felt I must respond.

Mr. Vickers' arguments against copy protection boil down to these:

1. Copy protection may disable use on hard disk drives.



2. Disk failure, coupled with the failure of the software company, may leave the user stranded.
3. Copy protection hurts sales because they can't be easily demonstrated.
4. Abuse of unauthorized copying is limited.

Let's take them in order. The first argument is easy to rebut. The user, quite simply, is responsible for determining the hardware limitations for any program he purchases. If he has any inkling that he might buy a hard disk later, all he has to do is ask (you might want to write this down), "Does this program support a hard disk?" This is a particularly pertinent question to ask for Mac owners, since many popular programs do not support a hard disk.

As for his second argument, it is quite true that failure of a software company can wreak havoc on its clients, but I think Mr. Vickers' concerns are exaggerated. If a user is particularly paranoid, he can buy two copies of the program. When you think of it, spending \$250 or so for an extra copy is rather cheap insurance compared to the cost of reproducing data on another program. But Mac users have even better alternatives. Most copy protected programs I've seen (20 or so) allow back-up copies to be made via the Finder, with the master used briefly as a validation key. This scheme saves wear and tear on the master, making its failure highly unlikely. Moreover, reputable software companies provide backup master copies to registered owners for free or a nominal charge and will replace defective disks within 90 days of purchase. This should satisfy most concerns about defective disks. As a final point, I know of no manufacturer of goods (of any kind) which promises infinite support for its product and the continued existence of the company. That is simply a risk the end user must accept and minimize the best way he can.

Mr. Vickers really lost me when he implied that copy protection hurts sales. To this I say, "So What?" If a certain copy protection scheme (such as his example of linking software to a particular machine) makes use or demonstration of the software cumbersome or impractical, then the message is: Users, don't buy it; Dealers, don't sell it. Mr. Vickers used AppleWriter as an example of a non-protected program that has sold well, implying that other software companies should adopt the strategy as well. He should have realized that Apple's objectives and those of independent software companies are not at

all compatible. Apple, being primarily a hardware manufacturer, is very happy to offer non-protected programs as a means to the ultimate objective of selling machines. Independents do not have hardware profits to offset lost revenues from unauthorized copying.

To his comment that only a few people copy programs, I say Hogwash. No reasonable user feels the threat of prosecution for unauthorized copying, since the enforcement of copyright and licensing laws is impractical and virtually nonexistent. And when a user is faced with the decision of paying \$250 for a dealer-supplied program or paying \$0.00 for a copy from his buddy, which route do you suppose he will take? The developer of a popular clip-art disk (which is necessarily non-protected) told me that they estimated about 15 unauthorized copies exist for every one sold.

In sum, Mr. Vickers' heart is in the right place, but his arguments don't hold much water. If we are to expect quality software in the marketplace, developers have to be given a chance to realize a return on their investment. Copy protection is, and will continue to be, the most effective way to protect that investment.

John Venable

Hello,

Enclosed is my renewal sticker from ST. MAC. Please send me some free sample issues. I have also enclosed a review (from a local bulletin board — Pirates Chest — 617-891-1349) of the December Macintosh Meeting of the Macintosh Users Group of the Boston Computer Society. I am meeting coordinator for the group.

I have also started a Macintosh Only bulletin board. It is called MAC BOSTON 617-262-9167. It has a message base, software available for downloading, transcripts of CompuServe conferences, and software and hardware reviews. It is running on an IBM-PC XT at Northeast Computer Stores Boston. Please inform your readers of the board.

Thanks  
Steve Garfield

The review

Message #39; SPARKY NEWS!

MSG LEFT BY: MAC SPARKY

DATE POSTED: FRI DEC 14 12:39:09 AM

The December Boston Computer Society Macintosh group meeting on Wednesday night was great.

We learned MicroSoft Word will probably ship December 20. New Finder will NOT be released in January, but later in the spring. Double-sided drives according to Apple are still a long way off and may never arrive because of alternative disk drive technology described in earlier MacSparky news.

The big January 24th Apple announcement will be \$7000 laser printer with 1.8 megabyte ram. In addition to the printer, "Apple Talk" will be released. It is the new low cost Applebus pseudo-networking system. Plus system for Mac to IBM data exchange.

New Filevision on the way that will accept MacDraw and MacPaint documents for database construction . . . but what practical uses are there for this wonderful product?

Habadex's HabaDrive single-sided external disk drive is \$450 (\$350 discounted). Looks cheezy and it is a noisy disk drive. A BCS member who bought one on Wednesday had an early reliability problem. It would not always boot the first time. He turned Mac off and on, then application would boot. Stay with Apple for now. Apple second drives are \$370. In stock and no tax at NEBA in NH.

As for Habadex software, development is in the direction of supporting 128K one-drive Mac owners with software similar to AppleWorks and Lotus 1-2-3. HabaWorks priced at \$199 will be released early next year as an inexpensive alternative to JAZZ (which must have 512K two-drive Mac to operate). If you want JAZZ, have the Fat Mac, and don't have the bread . . . you need Habadex's Quartet. It is their equivalent of JAZZ for less. They didn't show the products, so what can I say. Other planned releases include Habadesk (communications, word processing and database) for \$149; HabaCom (easy terminal application) for \$49; and the best of all, a desktop program called QuickFinder . . . but they aren't selling it unless you buy that crummy second drive of theirs! We hissed at that idea. Quickfinder is deceptively simple . . . it will launch a program in 12 seconds from either drive! Don't worry, I have it!

MacPublisher is awesome and will be available in early January. It pushes the envelope of merging text and pictures together on the same line and making it very easy



to do. I am impressed also with the right price of \$99. And of course, Apple is urging them to charge more (do you think it makes some companies look bad?).

MusicWorks is the Christmas stocking stuffer for the Mac . . . and it is in the stores and sounds perfectly wonderful on the stereo.

MacSparky

New York  
Mac User's  
Group

212-534-3716  
(300/1200) Mediocre

NY Mac  
BBS

212-643-1965  
(300/1200, RBBS, 10  
Megabytes of stor-  
age) Good

Mouse Hole

714-921-2252  
(300/1200 Technically  
oriented) Good

Boulder  
Mac BBS

303-449-0917  
Mediocre

I help program The Bay, so I may  
be biased, but you can try it for  
yourself.

Sincerely yours,  
Norman Fong

P.S. Keep up the good work.



© Axlon, Inc.

Dear Sirs:

Enclosed is my mailing label from St. Mac. Please send me four free issues starting with the January issue. I bought your December issue at a local ComputerLand store and found it informative. I have some information on BBS' for the Mac and would like you to pass this info on to your subscribers, as BBS' are very fun to use, yet are very informative.

Name  
The Bay

Phone Number  
415-775-2384 (2lines,  
300/1200 Baud, 20  
Megabytes) Very  
Good

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# SARGON III: BLOODTHIRSTY ASSYRIAN

—by Carter Tarrance

Sargon III, distributed by Hayden Software Company of Lowell, Massachusetts, is touted as "The Ultimate in Computer Chess".

Despite the impressive packaging with the ominous sounding name of "Sargon", suggesting a sword swinging conqueror, and the foreboding blank gaze of the carved wooden knight, I was certain that no \$49.95 piece of plastic designed to properly channel electrons could defeat me.

As an old Navy man with countless hours spent crouched over a chessboard, I was confident that Sargon would prove little challenge. Sargon was in for a work out, and I planned to muss him up a bit.

I glanced at Sargon's promotional sheet and dismissed its bold declarations:

- Choose from 9 different levels of play, from beginner to master (I'd have to boost it to "master" to even have half a game).
- Select Easy Mode to handicap Sargon's play within levels (that's for sissies).
- Plays a strong game, and plays fast (We'll see).
- Has an opening library of over 68,000 moves (It's just a machine).
- Contains the most sophisticated algorithm in chess software . . . Sargon III has beaten a chess master rated over 2200 (He must have had a rough night).
- Winner of the 1984 PC World Magazine microcomputer chess tournament (So What!).

I thumbed through the 98 pages of documentation which was categorized into: (1) instructions for playing chess; (2) defining the special features of Sargon; (3) all the moves in 107 of the great chess games; and (4) exercises in chess problem solving.

Being impatient to grapple with this Sargon, I didn't tarry long with the documentation; the diskette was inserted and my first game "opened".

As you can see from Figure 1 there appear three displays on the screen. A standard chessboard dominates on the left. On the right side there are two smaller displays; the upper one records the players' moves in computer algebraic notation. The lower display, "Window on the Search" shows Sargon's "move search" or his thinking. The left side of the search window is the Current Search. The Current Depth column shows how many half moves Sargon looks ahead. The Score shows how well Sargon thinks he is playing — a positive number (he's beating you) or a negative number (you're beating him).

It is readily apparent that Macintosh is the ideal computer for playing Sargon III because of its mouse and because it is menu driven. One merely places the

arrow on the piece he desires to move and drags that piece to the designated square. Rather than having to type in your moves with chess notation, the mouse emulates the play of chess on a board with real pieces. Thus, the Macintosh eliminates distractions inherent in other computers for the playing of chess.

I began. After a few moves my self assuredness buckled. Sargon fell for none of my baits. I couldn't trick him. He protected every piece, quickly captured the center ground, and relentlessly pushed forward.

Sargon moved his pieces with design, not desultorily. He wasted no moves. Defense and offense were equally forceful. He fended off every thrust, and then pounced on my King. "Checkmate — I win!" Sargon exclaimed. I was beaten, not bludgeoned, but dissected.

I returned to the File menu and initiated a "new" game. Again, Sargon flattened me. Telling myself it was time to go to bed, I turned off the Macintosh, and as I walked to my bedroom, I glanced back at the Mac, wondering if it would not be prudent to put it and Sargon in the garage and lock the house doors.

Next morning, after breakfast, I decided to again tackle Sargon. My confidence was bolstered with a fresh mind and a good breakfast. Twenty games later, I beat Sargon III. I staggered away from the Macintosh, let out a whoop, and poured myself a drink. After all, it was the cocktail hour.

I know it's impossible, but darn it, Sargon has a personality, and it's an arrogant one.

If Sargon obtains just a one piece advantage, he delights in opportunities to swap Queens, then wages attrition, and when your defenses are sufficiently weakened, launches a blitzkrieg against your King. Sargon has the instinct for the jugular.

What's even more insulting is the fact that once checkmate is realizable, Sargon will stop the game and tell you that checkmate will occur in so many moves, and force you to say "OK". I thought this was like saying "give" in a fight. Also, when Sargon beats you, the screen will display "I Win" and somewhere in that maze of copper, silicon, and plastic, you can detect a smile.

In short, Sargon III plays chess brilliantly, and is a cornucopia for the chess aficionado. Sargon is certainly not just for the beginner, and I'll wager he can give even a master rated player more than he can handle.

The Macintosh's menu design facilitates chess play. With pull down menus it's easy to select one of Sargon's many features or playing options.



The Level Menu reveals 9 different levels of play; the levels being a function of the amount of time allotted Sargon to think out his moves.

The Options Menu allows you to: (1) play Sargon at the level selected; (2) let Sargon "referee" between two human players; (3) task Sargon with playing both sides of a chess game; (4) change the board to relocate or remove a piece; and (5) replay a game currently in memory.

The Features Menu is the menu most often selected. It permits you to change sides with Sargon, stop his thinking, or negotiate a draw. Incidentally, Sargon has so much confidence in himself that he will more often than not decline your draw offer.

Another feature is the Hint function whereby Sargon will suggest a move to make. Frankly, I didn't trust him. And, unlike a human opponent, Sargon will permit you to "take back" a move if you make such an entreaty.

If the genius of Sargon's play is not enough for you, there is much more. Sargon contains all the moves of some of the world's greatest chess games, like the Fischer-Spassky World Championship Match in 1972.

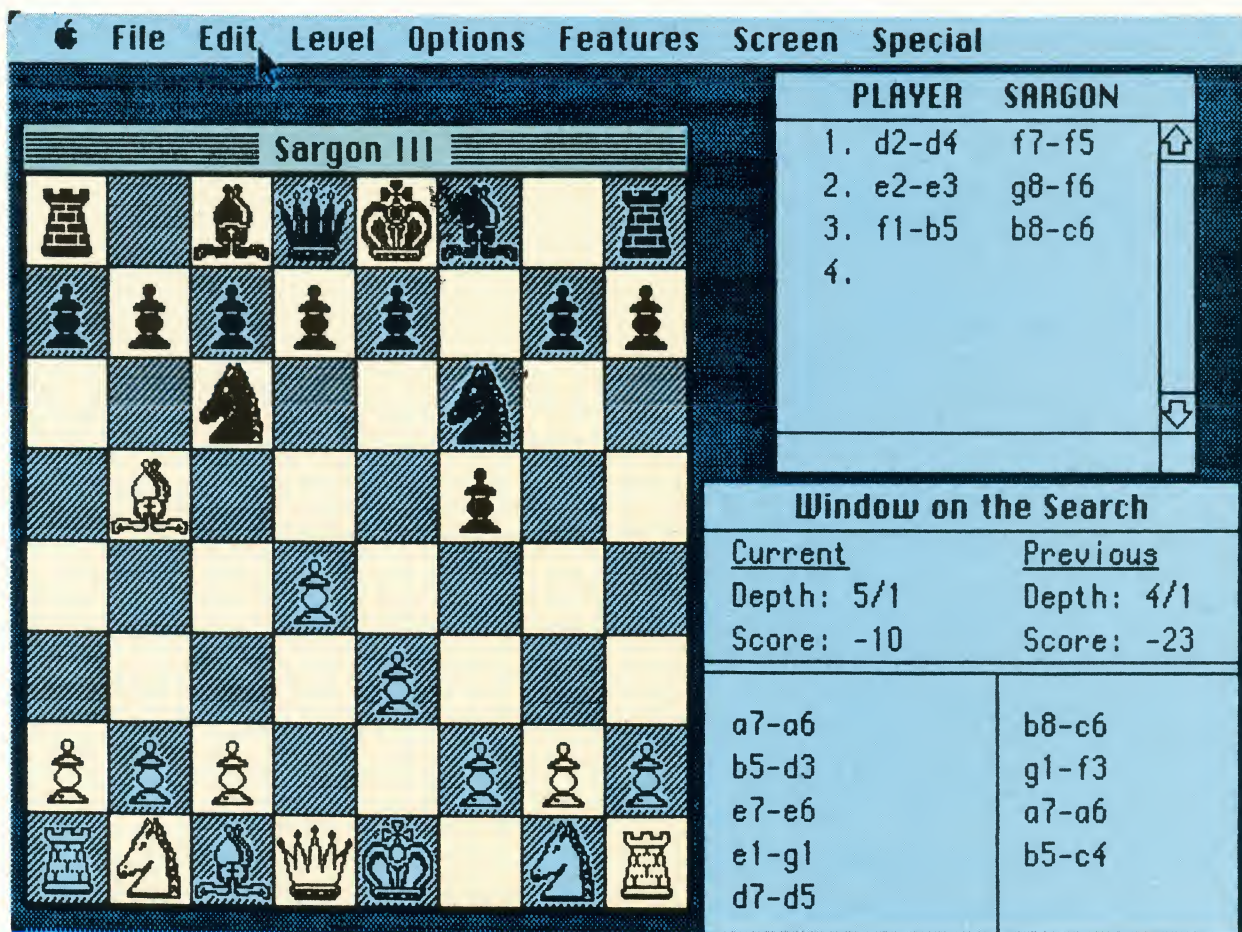
Finally, Sargon is also designed to build your chess skills with a menu for practicing checkmating, openings, tactics, strategy and endgames.

Be forewarned, Sargon like his ancient namesakes is a noble warrior, and will severely test your mental mettle.

Hayden Software Company  
600 Suffolk Street  
Lowell, MA 01853

(Carter Tarrance is an attorney and free-lance contributor to The MACazine.)

Figure 1







# MAC-BUSINESS

## Macintosh: Business Software and Using MacWrite for a Substantial Writing Project

By Pamela J. Roth

This month I looked at software available and software promised, and compiled notes about my experience using MacWrite for a substantial writing project.

### LOWEST PRICE SEEN FOR 512K UPGRADE: \$499 at RAM Computer Store

(soon to be Instant Software), Acton, Massachusetts. The price included same day service on Saturdays, 90-day warranty, free RAM disk; in home service available for an additional \$25.00.

### SOFTWARE: AVAILABLE AND PROMISED

From time to time a piece of software worth talking about crosses my desk. This month a piece I was looking forward to didn't arrive and another I wasn't expecting appeared. I was hoping to see Think-Tank 512K before the 18th of the month when I send my column UPS second day air from Massachusetts to Texas. I looked at a product called **Front Desk** by Layered, Inc. of Boston, Massachusetts.

### Front Desk— An Office Manage- ment Tool

The first thing I want to know even before trying a product is: what is the developer's goal and how did it go about fulfilling that goal? Any company that cannot, is

unwilling, or simply neglects to communicate that information to consumers should return to the drawing board until it has a solid plan and communicates that plan. The reason is simple. When I use a product I am investing my time and energy in learning about the product and developing my business procedures to fit the rules of the product. If the company is unclear about its goals, inconsistencies and weaknesses are likely to appear in its products and vital areas of company management, such as customer support, product design, and product enhancement.

When I purchase a product I am not only investing in a product, I am investing in a company. I need proof that the company will survive. I want to be convinced before I use the product that the developer has developed a product for my business and intends to support that product by creating new products and upgrades for current products. get the proof I need by thoroughly reviewing material that comes with a product. Although well prepared supporting material is no guarantee that a company will be here tomorrow, it does suggest that the company is working toward that goal and how it intends to reach it.

I was pleasantly surprised by the material that Layered, Inc. included with **Front Desk**. A sheet entitled **BACKGROUND** provided the straightforward information I look for. The first paragraph described the *business mission*. I reread this

page a number of times and did not feel that this was hype written to draw in the potential customer, sell the product, and make the bucks. No, Layered, Inc. has a plan, a business plan. And, they plan to be around to see it through.

I was further impressed by the 12-page booklet entitled **Creative Applications for Front Desk**. The sample applications are divided into five categories: facilities management, health services, general management, professional and time management, and project management. Each of the categories have descriptions of applications for different types of businesses, such as:

- Facilities management of college or university, corporate assets, or rental firm
- Health services by dental, medical, or optometric
- General management by executive or sales personnel
- Professional and time services of an accounting firm, advertising agency, beauty salon, or law firm
- Project management by an architectural firm, general contractor, or repair shop

In the booklet, Layered provides an explanation of how they came up with the applications and suggests that you use the explanation as guidelines for developing your own applications. They even state that they'll "be happy to help you set up your application and (would) enjoy hearing about other



application."

Another aspect of a product that convinces me of its worth is its depth. By that I mean, how many uses can I get from a software product and at how many levels? Some products look nice when you start and seem to work well during simple procedures. However, when you begin to get the hang of them and become innovative, the limits appear and the logic becomes convoluted. As an appointment book, **Front Desk** is easy to set up and once set up, the procedures for using it are logical. I can look at appointments for a week or month for all people (attorneys, consultants, architects), places (conference rooms, study rooms, tennis courts), or things (computers, screens, overhead projectors) scheduled, which Layered calls resources.

I can also look at segments. For example, if a client only has time to meet on Thursday mornings, I can look at all the Thursdays in a month simultaneously to see where our open time matches. In addition, I can double book in order to have a waiting list or determine whether the revenue lost warrants the hiring of new personnel by booking appointments for customers I turn away with a fictitious staff member. **Front Desk** is not only an appointment book, it also allows me to print reports of time scheduled and status of all appointments, amount billed, and number of hours worked by activity. And these are just a few of the things I can do with **Front Desk**.

Before purchasing this or any product, think about how you would use it. If you have a lot of appointments or periods of time that you need to track, **Front Desk** could be the answer. However, you still need someone to regularly book the appointments into the program. If you are using your Mac for something else when a call comes in, do you quit the program you are using and load the calendar? Or do you prefer to jot down the appointment and load it later? On the other hand, if your organization has a receptionist, secretary, or administrative assistant who handles all the scheduling, you may not have this problem. You might still have the problem if the person who does the scheduling also uses the Macintosh to do other things.

Wishful thinking: being able to access this product from the APPLE menu as a desktop accessory. That way when a call comes in, time must be recorded, notes are jotted, or a change recorded, it can be done without putting away what you are working on.

## Update on MacPublisher by Boston Software Publishers

Ed Holcomb of Boston Software Publishers presented MacPublisher™ at the December meeting of the Macintosh User Group of the Boston Computer Society. Anyone who wants to communicate with clients and customers *should* run out and purchase MacPublisher™...as soon as it arrives. At \$99, a price which Apple, Inc. has requested Boston Software to increase, you get a sophisticated article processor for generating, laying out, and pasting up newsletters and other documents. The amount of time and effort you save by using Mac to paste up a newsletter pays for MacPublisher within the first four hours of use.

That's right, you can paste up entire issues of your newsletter, catalog, price list, annual report, or whatever else you can think of, including pictures from MacPaint, clip art files, and those acquired with a digitizer. Want your own demonstration disk? Find someone who has a copy of MacPublisher™ and make a copy of it. You will be able to use the copy, except to print out the formatted newsletter. By that time you will be hooked and ready to plunk down your money. The version you purchase allows you to print out the issue you created with the demonstration version.

## USING MACWRITE FOR A SUBSTANTIAL WRITING PROJECT

Last month I mentioned that I made the switch from a Fortune 3216 multiuser system with 512K RAM, a 10 megabyte hard disk, a UNIX operating system, a Wang-like word processor to a 128K Macintosh (named Mickey Mac) with MacPaint and MacWrite. I can now report that I have used MacWrite 2.20 to produce an entire book (which will be published by the Que Corporation in early 1985, entitled **Using the PFS Family**). Most businesses will not use Macintosh to write a book, but it is worthwhile to take a look at the pros and cons of using Macintosh for a substantial writing project.

For the most part, Mickey Mac was and is a delight to use. The best parts about using Mac include:

- Resolution
- Sturdy keyboard with nicely spaced keys and left-handed mouse usage

- Room on my desk for all my notes
- Appearance of the page: such as different fonts, formatting, and seeing header and footer on the screen
- Ability to place artwork into the text

The resolution of the Mac screen is a delight to someone like myself who stares at the screen for an average of 8 hours a day. If you have or are thinking of purchasing a Macintosh for your own use or use by your staff, the resolution of the screen is an extremely important factor to consider. Bluggy eyes are no fun. Macintosh makes a difference. It is the best resolution that I have ever had the pleasure to use. Nevertheless, I recommend a two- or three-minute break from staring at the screen every twenty minutes. For me, the break coincides with SAVING the last 20 minutes' work, shuffling papers, and stretching.

The feel of the keyboard is wonderful. One of the reasons I was never impressed with the IBM PC and clones is the design of the keyboard. I cannot reach the left SHIFT key on a PC without hitting a backslash (\) key or moving my left hand off the keyboard. On Macintosh, the backslash key is out of the way above the RETURN key. And then there is the mouse. I like the mouse. True, for minor editing a cursor key might be nicer, but I'd say for 85% of the editing I do, the mouse gets me exactly where I need to be in a shorter amount of time and effort than a cursor keypad. In addition, because I am left-handed, I particularly enjoy the choice of having the mouse on the left side of my keyboard. Very nice.

As I wrote, I had my notes spread around as needed. It was very easy to get to my files and flip the pages of the looseleaf notebook where I kept the draft of my manuscript.

As for the manuscript itself, I used 12 point Geneva, bold, underline, and italics to emphasize as appropriate. I also used several other features throughout the book, including:

- The up arrow (↑) for indicating the SHIFT key on an IBM PC keyboard (Cairo 18 pt. then SHIFT and + keys)
- Bullets for lists (Option and 8)
- Trademark (™) symbol (OPTION and 2)
- Registered trademark (®) symbol (OPTION and r)
- Copyright (©) symbol (OPTION and g)



- Three lines (≡) for tables, headers, and footers (Monaco 9 pt and then press SHIFT-OPTION-TILDE)

Each header consists of the chapter number, title, a line in Monaco 9 pt, and a space to separate the header from the first line of the body of the page and is right justified.

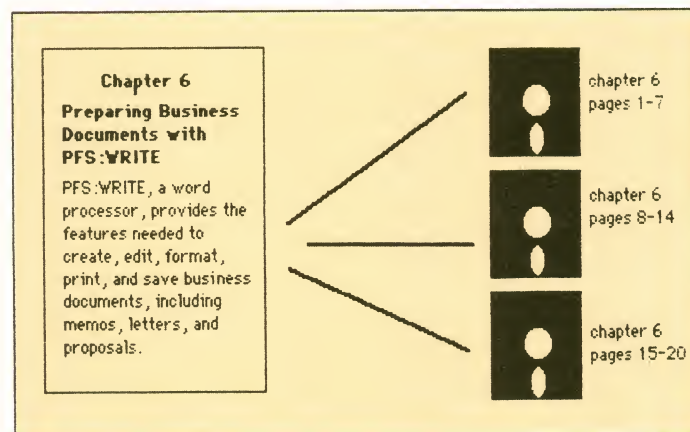
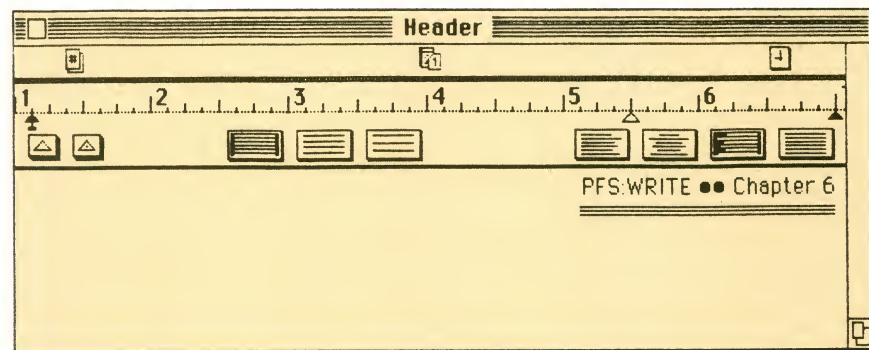
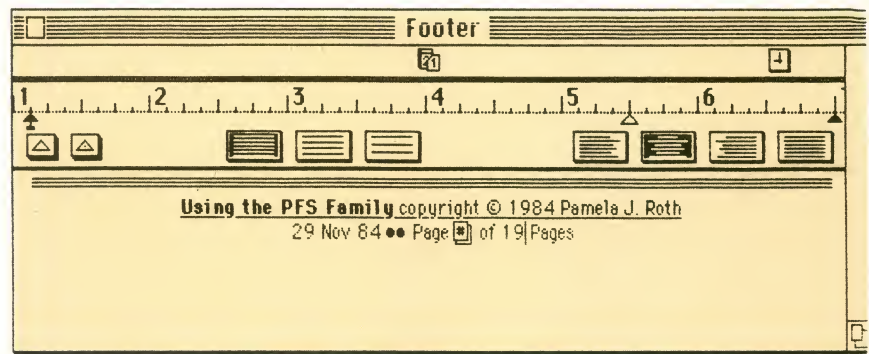
Each footer consists of a line in Monaco 9 pt, the title of the book in bold, the copyright notice with the © and the date, my name, the page number using the numbering icon, the total number of pages in the chapter, and a space to separate the footer from the bottom of the page, and is centered. I stopped using the date icon a long time ago because the length of the date misplaces other characters in the footer nearly every time the day or month changes. The number that replaces the page number icon appears in the same font as the first character in the footer. In this case, Monaco, 9 pt.

Every so often I needed to create a drawing that illustrated a concept. For example, for a chapter describing PFS:WRITE I used MacPaint to illustrate the relationship between a chapter and the files it is stored in, shown here with the permission of the Que Corporation.

On the other hand, there are certain features of MacWrite 2.20 that either are nonexistent or are buggy:

- Lack of page numbers
- Bug in the footer that has strange results from time to time, such as the footer disappearing and only the page number icon remaining
- Bug in the tabs, which makes the text disappear
- Lack of glossary
- No ability to store format
- Not always enough room on program disk to hold copy of document about to be printed
- Limited amount of space in a text file

To find out what page I was on I had to scroll to the bottom to check the page number in the footer. This requirement was particularly annoying when I want to print part of a file that was in the middle of a chapter divided into two or more files because the page number in the footer was not the page number that Macintosh would look for. Suppose a 15-page chapter is split into a file with pages 1-7 and another file with pages 8-15. To print pages 9 and 10, I would have to request a range of pages 2 to 3. Unfortunately, if there wasn't enough room on the disk to save a copy of the file it could not be printed—even if I only wanted to print one page. I made





sure there was always at least 40K left on a disk.

When the bug in the footer appeared, I scrolled the page so that the bottom was no longer showing. That always repaired the footer. To continue a chapter in another file I used the SAVE AS feature, gave the file a new name, such as "ch 6, p 8-15," modified the starting page number, deleted the text, and began composing the new pages. With the soon (?) to emerge upgrade to MacWrite and the Mac 512K, some of these problems and inconveniences will vanish, or so I am told.

All in all, I like the format I created—it makes a manuscript look professional, neat, attractive, and informative. And I enjoyed using Mac to create it.

## MACLINK: Getting to and from Files Generated by PC and PC Clones

MacLink, created by DataViz, Inc. of Norwalk, CT (203) 847-7724, pro-

vides a solution for linking otherwise incompatible software and hardware. Send a MacWrite document to a PC and have it appear in a WordStar™ file. Poof. No magic, just good planning and programming. And going back the other way: Send your LOTUS 1-2-3 from a PC file directly to a Microsoft Multiplan™ document on Macintosh. No need to use the CLIPBOARD. These are just a couple of examples of what you can do. DataViz, Inc. is working on the ability to transfer files between database managers as well. MacLink includes two disks (one for the Mac and one for the PC or compatible) and a cable for \$125.00; \$95 without the cable. Apple liked this product so much that it gave DataViz, Inc. space at Comdex in November for demonstrating MacLink.

**MACWORLD EXPOSITION:** I have my plane tickets for San Francisco. See you there 21-23 February.



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Henderson Associates, 980 Henderson Ave., Sunnyvale, CA 94086.  
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# Experiences with a 512K Macintosh-RAMDisk Power!

by Charlie Jackson

The big question these days is, "What is the difference between a 512K Macintosh and a 128K version?" I've had the opportunity to work with both and I would like to describe here the differences that are relevant to the everyday user.

The most obvious one is that some programs are going to require a 512K Mac in order to be able to use them. Lotus Jazz (scheduled for release in March) and MegaForms from Megahaus are such programs. No one knows right now how many programs will be like this. Owners of 128K machines shouldn't panic yet, though. Software developers are very aware that right now most everyone has 128K Macs, and they are not going to ignore this vast base of users.

Another difference is that many existing programs are enhanced by having 512K of memory. For MacWrite, which constrains the size of a document to the amount of characters that can be held in memory, this means that a document can be *much* longer.

But how important is this? By the time this article appears in print, the disk based version of MacWrite should be available. "Disk based" means that the size of a document is not constrained by memory, but rather by disk storage capacity. Double sided disk drives should also be available, jumping the capacity of a disk from 400K to 800K. So, the amount of memory available will not be critical.

Furthermore, more memory may be a mixed blessing with MacWrite 2.20. Its performance with large files is stunningly slow for some functions. I transferred a text file that was 45K from an IBM PC to my 512K Mac. After starting MacWrite and then telling it to OPEN the file, it took 1 minute and 55 seconds to load it. That's a long time!

Using the scroll box, it took 15 seconds to move from the beginning of the file to the end or vice versa. Saying "15 seconds" doesn't sound like much, but it is *extremely* slow for a computer operation that is happening entirely in memory.

Starting a printout wasn't too bad, it only took 14 seconds to do all the preparation and then begin printing. Unfortunately, when the printing was all done, it took another minute and 55 seconds to reload the document from disk. Apparently MacWrite uses the memory of the computer to prepare and hold a version of the document that is sent to the printer. When the printing is done, the original document must be reloaded.

The point here is that having all that extra memory isn't such a hot thing when the software doesn't use it very well. The newest version of MacPaint, on the other hand, does make good use of the additional memory in

a 512K Mac. The entire MacPaint document (I prefer to call it a picture) is held in memory, not just a part of it like in older versions.

When the 'grabber' (the hand) is used to bring a different portion of the picture onto the screen, there is no delay (no wristwatch on the screen while more of the picture is loaded in from the disk). The move is instantaneous, as is using the Show Page function (double clicking on the grabber). The new MacPaint is version 1.4. Everyone who buys a 512K Mac gets it automatically, but if you upgrade, you must be sure to ask for it (it's free).

Of all the differences between a 128K and a 512K Mac, I think that the most significant is being able to use a RAMDisk on the 512K version. RAMDisk refers to allocating a portion of the Mac's memory (the RAM, or Random Access Memory) to function as if it were a disk drive. Another disk icon appears in the upper right of the desktop and programs and files can be placed in this "disk".

It takes a special program to block off some of the memory and then trick the Macintosh into thinking that it is reading from or writing to a disk drive when it is actually dealing with this chunk of memory. This type of program is normally called a RAMDisk program. The "disk drive" that is created in memory is also usually referred to as a RAMDisk. What is gained? *Speed and flexibility!*

An application program that is in use tells the system to save a file to disk. The system sends the file to what it thinks is a disk drive. In actuality the "disk drive" is the portion of memory that was blocked off. The process takes very little time because it is memory rather than a mechanical device that is involved. There is no motor to be started, no read/write head moving across



Figure 1. Creating a RAMDisk



a disk, no bit-by-bit changing of magnetic fields.

There are at least two different RAMDisk programs in the public domain. Even though they are free, I don't recommend using them. Not because they are bad, but because there is one available commercially for only \$29 that is sooooo much better. It's the Mac Memory Disk from Assimilation Process.

When their program is run, the menu in Figure 1 appears. Only two things have to be done to create the RAMDisk. First, the option to "Create Temporary Disk" is selected, then the amount of memory to set aside is chosen on a thermometer-like scale that is presented.

The RAMDisk is then set up and a new disk icon appears on the right side of the desktop (see Figure 2). Application programs and documents can then be copied into this "disk." But being required to copy the System, Finder and MacWrite or MacPaint from some disk into the RAMDisk every time gets old. Also, the RAMDisk is not the startup disk after the copying is done. Until it is made to be the startup disk, the floppy disk can't be ejected (a quick way to make the RAMDisk the startup disk, after the Finder has been copied into it, is to hold down both the Command and the Option keys and double click on the Finder icon).

This is where the other option on the initial menu in Figure 1 comes into play. It allows you to create "auto-starter disks." As many different auto-starter disks as desired can be created. First, you make a duplicate of the original (it is not copy-protected). Next, you copy the appropriate files (e.g. MacWrite and ImageWriter) onto the duplicate disk. Finally, you start the Mac Memory RAMDisk program, select the option to "Create Temporary Disk automatically at startup," and then choose the files that are to be copied into the RAMDisk at startup, as shown in Figure 3.

I have separate RAMDisk Starters (as I call them) for MacWrite, MacPaint, MacTerminal and a Lisa. When I turn on the Mac (or Lisa) and insert one, the RAMDisk is created, the selected files are copied to the RAMDisk AND the RAMDisk becomes the startup disk. The Starter disk can then be ejected immediately.

When the System file and an application like MacWrite or MacPaint are in the RAMDisk, the time it takes to start the application is reduced dramatically. Table 1 shows some sample times that I got.

	From Floppy Disk	From RAMDisk
Start MacPaint	14 secs	3.5 secs
Start MacWrite	26 secs	3.8 secs
Start MacTerminal	30 secs	5.0 secs

NOTE: When starting from RAMDisk, there were no floppies in the disk drives. The startup time is much slower if a floppy disk is on-line.

Table 1: Comparative Startup Speeds

Another instance in which the difference in speed is quite noticeable is if you have applications that require using many different fonts. MacPaint or MacWrite usually have to go to the System file on disk and read in fonts when you ask for them. With the System file in a RAMDisk, this function becomes instantaneous.

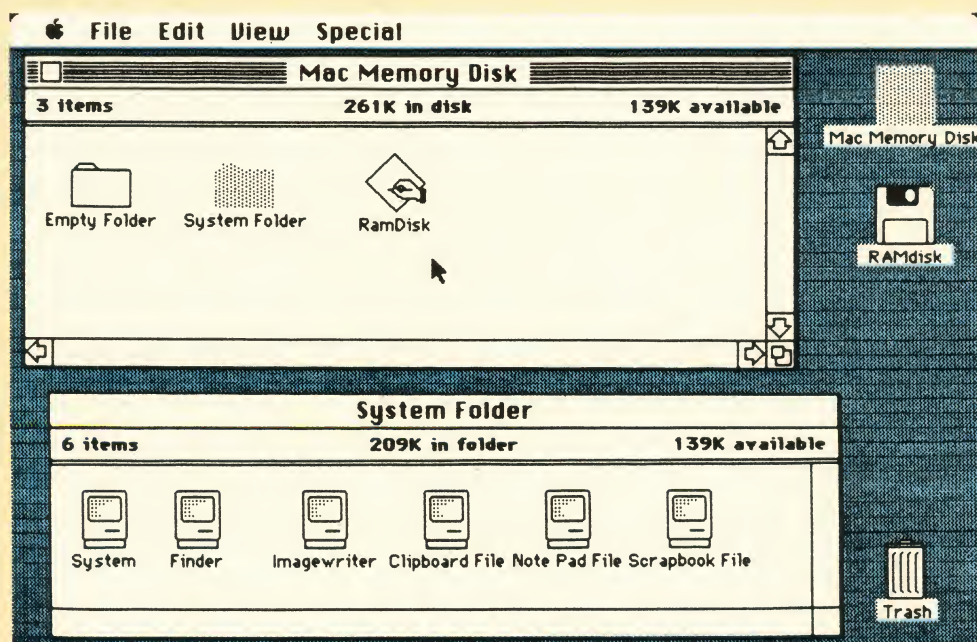
Have you ever seen the message from the Font Mover program to be patient because the updating of the System file might take as much as a minute? When using the Font Mover in a RAMDisk, it never takes more than five seconds to do this updating.

Speed is nice but often we can live without it. What I really like is the increased flexibility that I get. This comes from the fact that you get an extra disk drive out of the deal. Since I have an external drive, it's like there are three disk drives connected.

I can have the System and an application running from the RAMDisk and this leaves me two drives for non-startup data disks! The full 400K of space on both disks is available for files. This is nice! It is particularly handy whenever I have to swap files between data disks.

I can put two in, do whatever copying I need to, eject one, replace it with a different one and do some more consolidating. No more messages to "Please insert the

Figure 2: A RAMDisk on the Desktop





disk: MacWrite" and then having to eject that startup disk again so some other disk can be inserted.

If you have just the internal disk drive, bingo, you now have two disk drives. It can be very quick and convenient to create a RAMDisk that is the "startup" disk, insert a data disk, copy a few files to the RAMDisk, eject the floppy, insert another floppy and copy the files to that floppy disk.

Oh boy, now I've done it. I've probably made it even harder for you to choose between that external drive or the 512K of memory! Sorry about that. While still on a positive vein here, I want to pass along some tips about using the RAMDisk program from Assimilation Process.

First and foremost, experiment with all possible setups. See what will fit in the RAMDisk and what won't. It might be convenient to just have the System Folder stuff in there. If you're looking at documents and not really saving new info then you might want to put the files in the RAMDisk too. Most of the time you have the System stuff and an application running in the RAMDisk and you save your documents to a floppy disk (it is important to do this because saving to the RAMDisk is superfluous, it's still just in memory and you'll lose it if you have a power failure).

When you've done your final save and want to switch to another program entirely and also use a different data disk, eject the disk *first* and then quit the program. This works just fine and it saves time. You don't have to wait while the system re-opens the disk which is no longer needed and then wait some more while it closes it when you eject it.

Speaking of ejecting disks, one of the nice touches the Assimilation Process people put in is that if you try to eject the RAMDisk, it just ignores the command. Even when you're in a program like MacWrite and try to eject it (by clicking the EJECT button in the dialog box used to open files, also known as the Mini-Finder), the potential error is trapped and a polite message comes up saying "A system error occurred, please try again." This, combined with the fact that you can allocate varying amounts of memory to the RAMDisk and have automatic starter disks, are why I say don't use a public domain program.

Using the public domain RAMDisks that I've seen, if you've made the RAMDisk the startup and eject it, the system allows this to take place. The next time you try to do something though, you get a message "Please insert the disk: RamDisk." Guess what, you're stuck. This is called "hanging the system" folks and it means you have to turn it off (or reset) and start all over.

Here's an undocumented feature of the Mac Memory Disk program that I discovered by accident. When a RAMDisk starter disk is created, it turns out that the System file is modified. Copying this modified System

file to another disk makes it a "Starter" disk (at the time you do this copying the destination disk cannot, of course, be the startup disk that the Mac is using). Then, when you use it to start up, an empty RAMDisk is automatically created, but the original disk remains the startup disk.

Even though all of these uses of the RAMDisk are great, there are some disappointments too. A RAMDisk on a 512K Macintosh can have a maximum of 314K allocated when using the program from Assimilation Process. I don't know if this is an inherent limitation or whether somebody else might raise that later with a different version of a RAMDisk program.

Anyway, the biggest disappointment is that you can't have the system files as well as MacWrite and MacPaint in a RAMDisk all at once. It would be absolutely fantastic if we could have both MacPaint and MacWrite in there so that switching back and forth would be lightning quick.

In fact, even with just the System, Finder, Imagewriter and MacWrite files in there, you can run out of space. When I tried to print a 10-page double-spaced document (the file itself was on a floppy, not in the RAMDisk), there was not enough room for the temporary file that was being saved to the RAMDisk and it bombed. I do have a few more fonts than usual in the System file, but only a few extra.

On my MacTerminal starter disk, I have a System file that only has the minimally required fonts in it and it's down to 75K. On the MacPaint starter disk, I had to get the number of fonts in the System file down, too. Even after doing so, I ran out of room in the RAMDisk almost immediately while using MacPaint and trying to cut and paste to the Scrapbook (the Scrapbook, unlike the Clipboard, is held on disk).

Also, when you use a RAMDisk, you are essentially working on a 128K machine with an extra disk drive. When in MacPaint, moving around with the grabber does bring up our old favorite, the wristwatch, but only for a split second. Even though MacPaint is going out to the disk to get more of the picture, it is going to the RAMDisk, so the pause is almost unnoticeable.

All these shortcomings arise because we can only allocate to the RAMDisk 314K of the onboard 512K of memory. The only way I know of right now to have more is to use a Lisa in Macintosh emulation mode (with MacWorks). If you own a Lisa with 1024K or RAM, better known as a megabyte, the Mac Memory Disk allows you to create a 741K RAMDisk!

The ramifications of this should be obvious by now. Just for the fun of it, I created a 500K RAMDisk on my Lisa and began putting every font I could find into the System file. I had the System file up to 390K and discovered a limitation on the number of fonts other than disk space. When you open the pull down menu for Fonts, if it goes further down than the bottom of the screen, you simply can't get to the fonts that are off the screen!

Wouldn't it be nice to have more memory in the Macintosh? Ah well, you know the old saying, you just can't have enough RAM. So Apple, when did you say those Megabyte Macs are coming?

Products Mentioned:  
Mac Memory Disk—List price: \$29  
Assimilation Process  
800-MAC-5464  
800-421-0243 in California

Charlie Jackson is President of Silicon Beach Software.

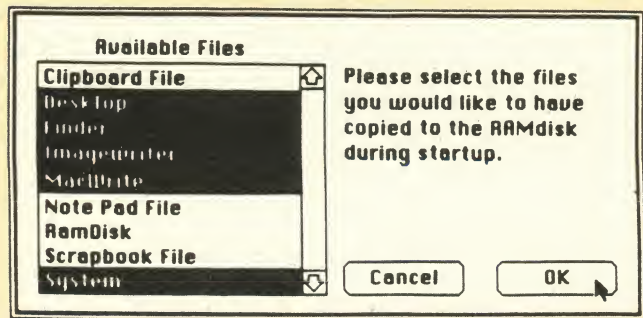


Figure 3: Creating an Automatic Startup disk





# M.U.G. SHOTS



## USER GROUP

**REPORT** by Charlie Jackson

The primary function of a user group is to provide a forum for the dissemination of information. This column is dedicated to assisting groups in this function. Last month I included a list of all the User Groups that I had on file. Each month as I hear about new ones springing up I will list them at the end of the column.

So, if you are involved in a new group (or one that I don't yet have on my list) please send me all the info you can on your group. If you need a copy of the full list, just send me a request and I'll shoot you out a copy of the most current one.

It is important for user groups to be in contact with each other. Those that have newsletters usually like to swap their newsletter with anyone else who is producing one. Speaking of newsletters, that's the topic this month. Many of you are thirsty for more info on the Macintosh and newsletters are one way to get it. So, I've pulled together all the information that I currently have on newsletters.

## NEWSLETTERS

### The Club Mac News

Club Mac is not a User Group in the sense that we usually use the term. To most people a User Group is one that is non-profit and all of the group's work is done by volunteers. Club Mac is a 'for profit' organization. This is by no means meant as a negative comment, it's

just for your information.

In fact, having a paid staff will hopefully mean they can provide a quality product on an ongoing basis. In most User Groups, if the one or two key people get too busy one month, a newsletter will undoubtedly suffer (or maybe not appear at all).

They have a paid staff and are working hard at getting good visibility in the Macintosh community. For an annual fee of \$35 they offer a newsletter, a telephone help line available during working hours (local time) and access to their new electronic bulletin board. Yes, the bulletin board finally came up in December. It had been promised long before that, but apparently they ran into technical difficulties of some sort.

Their newsletter, after a slow start, has turned into a good source of information. The December issue was 52 pages. A typical issue contains such things as letters to the editor, articles on new products, formal reviews of products, gossip and speculation (my favorite), and free classifieds.

They've got a decent amount of advertising too. When I say that, it is with the assumption that most Mac users are still at the point where they like to look at all the ads. This phenomenon will probably last about another year. Then, there will be so much software available that it will be hard to keep track of it and we will all be tired of slick ads.

If you are keen on getting more info on the Mac, this newsletter is one that you will want to add to your subscription list. For the money, it is a pretty good deal.

Club Mac  
735 Walnut  
Boulder, CO 80302  
303-449-5533

### Semaphore Signal

Semaphore Signal is for Macintosh and Lisa users and it is FREE! Yes, free. All you have to do is send them the serial number of your Macintosh or Lisa and you get a subscription. How can you lose?

Lately it has been running from 15 to 18 pages. There are usually two major articles and then just a few other tid-bits. Occasionally there has been too much Lisa stuff for my liking, but not recently. I would imagine that most of their subscribers are Mac people now and that they will cater primarily to us.

They've had some very informative letters to the editor (some of the best tips you'll ever get come from letters to the editor—be sure to read them carefully in the MACazine) and some excellent reviews. They are not afraid to tell it like it is in these reviews.

Semaphore Signal  
207 Granada Dr.  
Aptos, CA 95003  
408-688-9200

### MacTech

This publication is for people who are interested in doing programming on their Mac. It looks like it is going to be a very good resource for them. The first issue, which was 20 pages, came out in December. It contained articles on Assembly Language, Basic, MacPascal, Forth, and C.



I liked what I read in the feature on Basic (the only one I could even try to read). Because I was concerned that the rest of the content might be too light, I solicited comments from some of my heavy-duty programmer friends and they were very enthusiastic about it. I recommend MacTech highly to anyone who is getting into programming on the Mac at any level.

Compu-Tutor, the publisher, actually calls it a journal. Right now it is the size and scope of a newsletter, but I guess they have big plans.

MacTech  
P.O. Box 846  
Placentia, CA 92670  
714-993-9939

## San Diego Mac News

It's kind of hard for me to comment on this one since it's from my local group. I'll try to be objective. The editor, Gordon McComb, is a free-lance writer (he has a Macintosh User's Guide out that is published by Sams) and his expertise and experience are reflected in the polished look of this newsletter.

It comes out once a month and costs \$15 a year. It's currently running between 18 and 20 pages. There are four fairly regular columns, one for novices and another (called Mac Doctor) for advanced programmers. The other two are editorial in nature, one from

the Chairman and one from the Editor. A typical issue will include these columns, a review or two, some sort of "how-to" article, and a small Art Gallery. Occasionally Eric Zocher, the local programming guru, puts in his update on what is available in the way of programming languages.

San Diego Macintosh User Group  
P.O. Box 12561  
La Jolla, CA 92037  
619-566-3939

## The Mac Street Journal

The New York Macuser's Group, one of the largest groups around, puts out a newsletter once a month. Their membership fee is \$32. The newsletter mentions an electronic bulletin board, but it is not clear whether membership is required to get access to it. The phone number for it did appear in the December issue, which was 16 pages.

A lot of what appears in the Mac Street Journal is specific to their own Special Interest Sub-Groups. There are normally one or two general interest columns and they do like to include product reviews.

The New York Macusers' Group  
P.O. Box 6686 Yorkville Station  
New York, NY 10128

## MacDigest

MacDigest is a monthly newsletter from The Los Angeles Macintosh Group, a relatively new group. Their December issue was 8 pages. They like to do reviews, gossip and viewpoints. I like the looks and contents of this one. For such a new group they are doing very well. Their newsletter will undoubtedly grow with them. A subscription costs \$25.

Los Angeles Macintosh Group  
12021 Wilshire Blvd., # 349  
Los Angeles, CA 90025  
213-392-5697

## Newsletter of the Berkeley Macintosh Users Group

The Berkeley Group operates out of the University of California at Berkeley. They have a different approach to their newsletter, they pro-

vide it on disk. It comes out once a semester. The Fall '84 issue was 24 printed pages. It contained news items, product reviews and descriptions, and some "how-to" articles.

Membership dues, which include the newsletter disk, are \$15 a semester. This means that you get one issue for \$15. This is probably a bit steep what you get. This one's for true die-hards.

Berkeley Macintosh Users Group  
1442A Walnut St. Suite #153  
Berkeley, CA 94709  
415-849-9114

## FatBits

The Conejo Valley Macintosh Users' Group puts out FatBits once a month. As of their sixth issue it was still only 4 pages. It is primarily for reporting to local members on what the group is up to, so it probably won't be of much interest to out-of-towners.

The issue that I have does not give details of how to subscribe. Conejo Valley Macintosh Users' Group  
P.O. Box 7118  
Thousand Oaks, CA 91359

## MacPoint

This is a Dru Shipman production. It costs \$20 a year for 12 issues. It's a one-man show. Dru writes a few lines and prints a lot of excerpts from other sources. Interestingly, he says that it is produced entirely with MacPaint. Dru is to be commended for his efforts but pass on this one for now.

MacPoint  
5704 Harper #201  
Chicago, IL 60637

## Newsletter—Victoria's Machintosh User's Group

I have only their very first issue, which was done in July of '84. It was small but good. They've probably changed their name by now, as that first newsletter indicated they were going to try to come up with a new one. If they have managed to grow and to improve the quality of their newsletter it should be worth looking into.

Victoria Macintosh User's Group  
PO Box 5338-B  
Victoria, British Columbia  
V8R 6S4 Canada



Finally, here are some newsletters that I have heard about but that I haven't actually seen yet. The first two are from large groups, so it might be worth your while to investigate them.

Newsletter—Boston Computer Society Macintosh Users Group  
1 Center Plaza  
Boston, MA 02108  
617-354-7899

Newsletter—Capitol Macintosh Users Group  
9431 Georgia Ave.  
Silver Springs, MD 20910  
301-585-4262

Newsletter—El Paso Mac User Group  
5534 Ketchikan  
El Paso, TX 79924  
915-751-3508

The Macintosh Connection  
Newsletter (\$35 for 10 issues)  
Hi-Tek Publications  
PO Box 99  
North Salem, NH 03073

No doubt there are more newsletters floating around out there that I haven't seen yet. Editors, please send me a copy of yours so that I can report on it here.

This month's additions to the list of User Groups:

The Anchorage Mac User Group  
C/O Nevin McClintock  
1200 Dimond #812  
Anchorage, AK 99515  
Nevin McClintock; 907-344-6465

Machintosh Users Group of Henderson  
116 Pine St.  
Henderson, TX 75652  
John Biggs

Macintosh User Group  
ICOR 200 W. Washington  
Fairfield, IA 52556  
Tim Kelly

Oak Ridge MACUSERS' Group  
Route 2 Box 65E  
Oliver Springs, TN 37840  
Roger Perkins; 615-435-1120

Oklahoma City MacUsers  
P.O. Box 6915  
Lawton, OK 73505  
James Carpenter

Ventura County Macintosh Club  
1413 South Victoria Avenue  
Ventura, CA 03003  
Brian Wu;  
805-644-5220; Newsletter

Mid-Cities Macintosh  
Phil Brown, President  
1209 Glen  
Ellis, TX  
817-540-0063

Charlie Jackson is Chairman of the San Diego Macintosh Users' Group. Please send inquiries or information about User Groups to him at: P.O. Box 26693, San Diego, CA 92126.





# Knowledge Maps: Filevision Applications

By Allen Munro

In science fiction movies and television shows of the sixties, computers were often used as intelligent encyclopedias. A user—typically not the dashing hero, but rather his or her mentor—would ask for information about the shipping of paper products from Vladivostok and its relation to bookbinding in Hong Kong. The computer would flash its lights for a few seconds, and then present all kinds of pertinent information, in both text and graphics, along with admonitions about avoiding a certain sinister crime boss in Macao.

People's expectations about the uses to which computers should be put were shaped by those fantasy computers, and in that respect the computer revolution has been a disappointment. Personal computers can be used to write, to maintain mailing lists, to develop budget projections, and to play great games. But they can't be used to get information about something that the user didn't type in first.

Oh, the mainframe-based data services, such as those offered by the Source and Compuserve provide a wide variety of information, but that kind of information access isn't really computing. Aside from a few key word search facilities to determine what pages of text to present to the user, nothing that might be called computation is involved in using that kind of data. What computing does occur in such an information transaction is all in the central computer, anyway. You could as well use a dumb terminal or even (yechh!) a teletype to get at the information, and not bother with a personal computer at all.

But now comes the Macintosh and Filevision. The Mac is a pure graphics machine; it doesn't even have a character set in ROM. And Filevision is a data filing system that completely transcends the teletype origins of filing systems. It presupposes that data elements will look like something—that they can be represented graphically—and that they will have some topological relationship to each other. Given the right Filevision data files, you can use your Mac in much the same way that people use computers in the movies.

Using Filevision, it would be easy to build a data file for all the restaurants in your neighborhood or town. A map on the screen shows their location. If you click on any one of them, you will find its name at the bottom of the screen. (Fig. 1)

Now suppose that you want to go out to dinner, but you don't have a dime in cash and you don't want to run up a large credit card bill. You can use the **Highlight** some option in the Tinker menu to specify the search for a restaurant that is highly rated, accept credit cards, but is not too expensive. (Fig. 2)

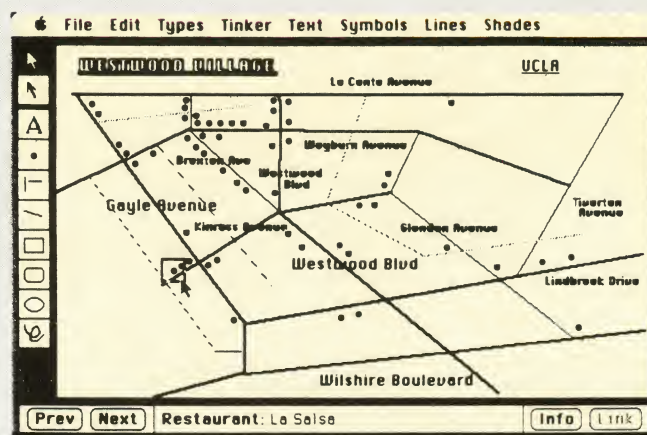


Figure 1

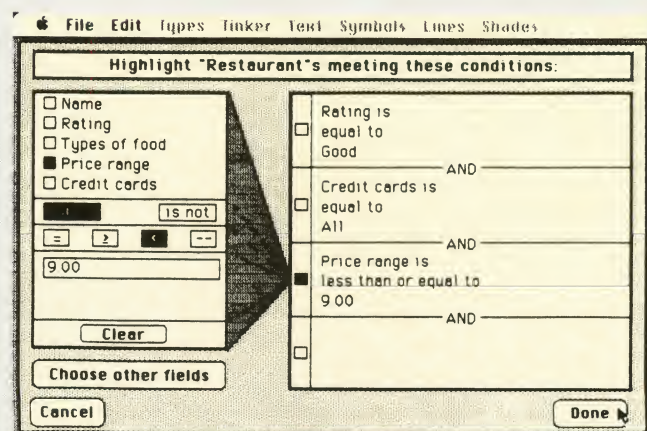


Figure 2



The restaurants that do not meet these criteria will be dimmed, making it easy for you to select each highlighted item in turn and examine its **Info**. (Fig. 3 & 4)

This restaurant map application is included on the Filevision Ideas disk, a collection of more than 25 data/drawing files for Filevision. To use the applications on the disk, you must have the Filevision disk itself, of course. Telos Software Products, the maker of Filevision, is distributing the Ideas disk to computer clubs, stores, and interested users to provide some examples of the kinds of things that can be done with Filevision. They encourage its copying and distribution, so you may be able to find a friend who already has a copy. If not, you can send a disk and a self-addressed stamped envelope to

Filevision Ideas Sampler  
Telos Software Products  
3420 Ocean Park Blvd  
Santa Monica, CA 90405

and they will send you a copy.

The Ideas disk includes several maps (California, the Napa Valley, a housing subdivision, and two for the 1984 Olympics), some floorplan sketches, an interactive technical drawing (of the human eye), and an example of a conventional data filing application using a picture of an open file drawer with hanging folders. In addition, there are more than 15 examples of files that demonstrate animation using Filevision. A very impressive set of linked files makes up a small D-and-D style adventure game created with Filevision. (Fig. 5)

Compuserve users can get access to a number of Filevision discussions on the Micronet Apple Users Group (MAUG)—GPCS51. A number of drawing files can be downloaded from the XA4 storage area.

Next month's column will present the techniques for creating animations without programming, using Filevision. This is a method that can be used not only for entertainment, but also as a very effective demonstration/simulation technique. A set of drawing files on the internal combustion engine, for example, can include some that actually show pistons and valves moving in sequence. A historical atlas drawing file can show the advance of the barbarians on Rome.

Filevision offers educators the opportunity to create a new kind of computer-based instruction (CBI). In conventional CBI, the educator maintains rigid control over every aspect of the student's use of a computer-based lesson. Typically, the CBI designer or programmer plans a strict sequence of educational activities, with a few remedial loops for the students who need extra help.

Filevision is an ideal development environment for a more student-directed approach to CBI. When an educator provides a set of information-packed files, appropriately linked to each other, the student has control over how the information they contain will be accessed. Students can approach a topic from a perspective of personal interest, rather than being forced to adopt the CBI designer's viewpoint. Surely such an approach will be more appealing to students, particularly for those that enjoy self-directed learning.

Macintosh owners as a group must contain more achievers than most groups of similar size. Most Macintosh owners are probably expert or near-expert on some topic likely to be of interest to others. Filevision offers you an opportunity to make some of that expertise available to others, using computers. Unlike conventional approaches to transmitting knowledge with computers, using Filevision does not require programming. The subject-matter expert does not have to also be an expert programmer. Yet you can produce a much more interactive presentation of your knowledge than would be possible with a book, or even with a conven-

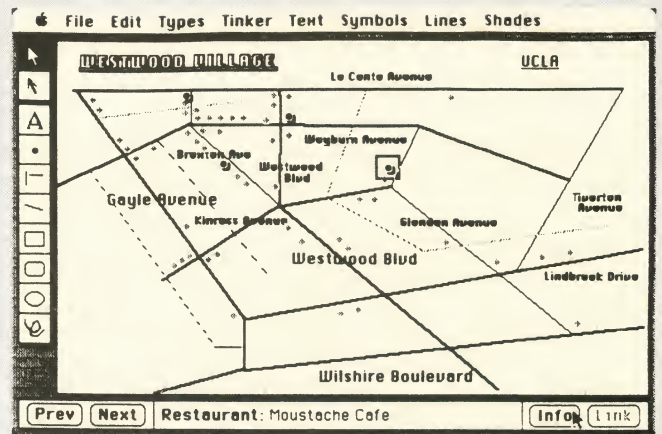


Figure 3

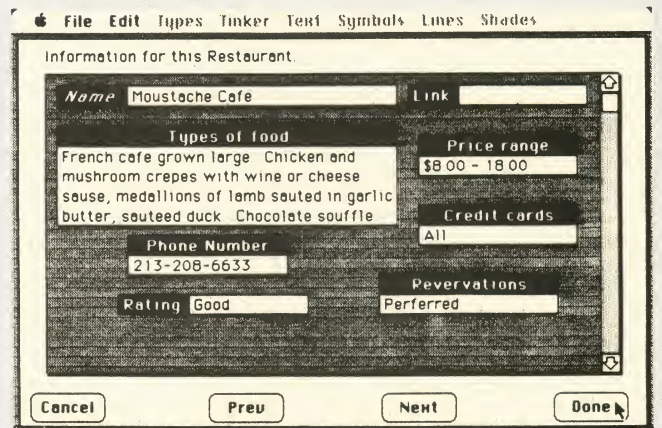


Figure 4

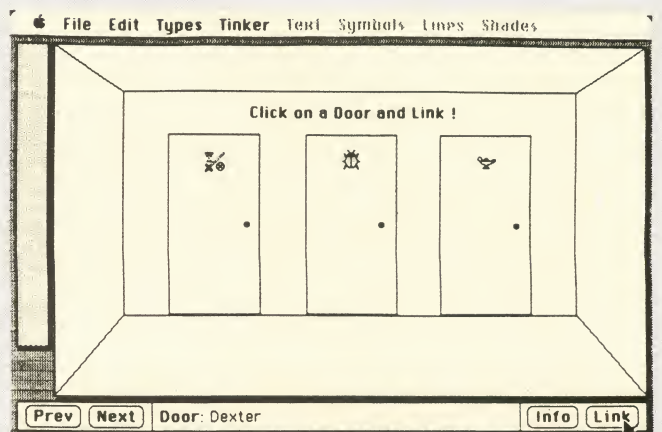


Figure 5



# One connection.

## SOFTWARE

### ATI

MacCoach Training (*Interactive teaching program for using the Mac. Two disks/handbook.*)... \$49.

### Ann Arbor Softworks

Animation Toolkit 1 (*Create, edit, and animate pictures right on your Mac.*)... 39.

Animation Toolkit 1 advanced version (*All the features above plus sound.*)... 54.

### Apropos

You must have Multiplan to use.

Financial Planning (*Home budget, tax, auto, life insurance and college planner.*)... 65.

Investment Planning (*Stocks, real estate, loans, IRA vs. CD's.*)... 65.

### Axlon

Art Portfolio (*120 drawings await your creative desires.*)... 44.

Card Shoppe (*Make professional quality greeting cards.*)... 44.

### Creative Solutions

MacForth - Level I (*Learn to program your Mac in "Forth". Define your own menus & windows.*) 99.

MacForth - Level 2 (*Now you can get serious. Level 2 includes an assembler, floating point, and advanced graphics.*)... 139.

### Desktop Software

1st Base (*File management and report writing program for use with MacWrite & MacPaint.*)... 109.

### Dow Jones

Straight Talk (*Communications package for accessing on-line databases and other Macs and micros.*)... 54.

### 1st Byte

Smooth Talker (*Voice synthesis software for the Mac.*)... 119.

### Haba Systems

Habadex (*Desktop management with address phone directory, appointments, travel expenses, phone dialer, database management, and mail-merge capabilities.*)... 78.

### Harvard Associates

MacManager (*Improve your strategic business skills with this simulation.*)... 35.

### Hayden Software

Hundreds of design images that can be put into Mac's scrapbook, adjusted with MacPaint, and used in your own drawings. For professionals and amateurs.

DaVinci Buildings... 34.

DaVinci Interiors... 34.

DaVinci Landscapes... 34.

### Hippopotamus Software

Hippo-C - Level I (*Edit, compile, link, and execute C programs on a 128k Mac.*)... 117.

### Human Edge Software

The Sales Edge (*Helps prepare strategies for all aspects of sales negotiations.*)... 169.

The Communications Edge (*Identifies communications strengths and weaknesses.*)... 113.

The Management Edge (*Identify and evaluate management skills and discover methods for improvement.*)... 129.

The Negotiation Edge (*Develop "How To" plan by analyzing critical factors.*)... 179.

Mind Prober (*Software that reveals people's hidden thoughts.*)... 31.

### Living Videotext

ThinkTank 128 (*Put your ideas into ThinkTank and let your thoughts flow. The perfect idea organizer.*)... \$85.

### Magnum

McPic - Volume I (*Create fancy memos, maps, logos, etc. with this collection of MacPainted drawings.*)... 35.

McPic - Volume II (*150 new pictures.*)... 35.

The Slide Show Magician (*For presentations, teaching or just plain fun.*)... 38.

### Matrix Advocates

Images (*Ready to use graphics and pictures.*) 28.

### MegaHaus

Megafile (*Instant access to all your data. Print reports in a variety of formats.*)... 139.

Megamerge (*A mailmerge for Macwrite — generates form letters and mailing labels.*)... 86.

### Microsoft

Basic (*The standard micro language — now available for the Mac.*)... 99.

Chart (*Business graphics program transforms numerical data into over 40 different graph styles.*) 89.

Multiplan (*One of the most tried, proven, and popular electronic spreadsheets.*)... 125.

### Miles Computing

Mac the Knife - Volume I (*Nearly 500 illustrations — borders, icons, maps, etc. Use with MacPaint.*) 27.

Mac the Knife - Volume 2 (*Over two dozen new fonts for your Mac.*)... 29.

### Monogram

Dollars & Sense (*Personal financial management program for your Mac.*)... 84.

### Organization Software

Omnis 2 (*Information management system with global update/delete, user-defined records, mail merge, etc.*)... 145.

Omnis 3 (*Database management compatible with Omnis 2. Supports up to 12 open files.*)... 219.

### Palantir

MacType (*Typing instruction, supports both Qwerty and Dvorak keyboards.*)... 31.

### ProVUE Development

OverVUE (*Database program with powerful math capabilities. Can sort 1000 records in 2 seconds.*)... 185.

### RealData, Inc.

Real estate and financial analysis templates. You must have Multiplan to use.

#1 Income producing real estate... 75.

#2 General financial analysis... 75.

#3 Commercial real estate development 75.

#4 Residential real estate... 75.

### Software Arts

TK!Solver (*An equation processing program to help you solve your most difficult problems.*)... 149.

### Software Publishing

PFS:File (*Powerful system for updating, recording, retrieving, and printing data.*)... 79.

PFS:Report (*Transfers PFS:File data into reports, according to your specifications.*)... 79.

PFS:File & Report (*Buy both and save.*)... 125.

### Stoneware

DB Master (*Complete database management featuring on-screen prompts, browse capability, built-in report generator and more.*)... 129.

### T/Maker

Click Art Personal Graphics (*100+ drawings; cartoons, symbols, borders, famous people.*)... 35.

Click Art Publications (*Graphics for newsletters, reports, invitations and more.*)... \$35.

### Telos Software

Filevision (*Store visual data along with relevant numbers and text. This unique graphic filing program lets you create a database out of whatever your mind can envision.*)... 109.

### Think Educational

Mind Over Mac (*Five challenging games to develop mathematical & memory skills.*)... 36.

Mac Edge (*Learning programs in math and reading using graphics and games.*)... 36.

### Videx

MacCalendar (*Includes a reminder system to alert you of important messages or notes.*)... 53.

## GAMES

### Axlon

MacMatch (*Match the squares and solve the hidden puzzles underneath.*)... 34.

### Blue Chip

Millionaire (*Realistic stock market play. Start investing with \$10,000. Difficulty increases with success.*)... 37.

Tycoon (*Learn to invest in agricultural commodities, precious metals, and foreign currency.*)... 37.

Baron (*Learn the ins and outs of investing in commercial, residential, and undeveloped property.*) 37.

### Broderbund Software

Lode Runner (*Arcade style. Attempt to recover stolen gold.*)... 27.

### CBS

Murder by the Dozen. (*12 intricate mysteries. Work alone or in teams against rival detectives or the relentless clock.*)... 29.

### Datapak Software

Turn your Mac into a casino!

Mac-Jack (*Electronic black jack.*)... 27.

Mac-Poker (*Electronic poker. Habit-forming when the chips are down.*)... 27.

### Hayden

Sargon III (*The ultimate in computer chess. 9 levels of play.*)... 35.

### Industrial Components

Mac Puzzle (*Create your own jigsaw puzzles out of MacPaint drawings.*)... 27.

### Infocom

You're a magician challenging the dungeon master, a detective solving a murder mystery, a scientist deciphering hieroglyphics, or just an ordinary mortal meeting the Wizard of Frobozz. (*Difficulty levels shown in italics.*)

Seastalker (*junior*)... 27.

Enchanter (*standard*)... 27.

the Witness (*standard*)... 27.

Planetfall (*standard*)... 27.

Cutthroats (*standard*)... 27.

Hitchhiker's Guide (*standard*)... 27.

Zork I (*standard*)... 27.

Zork II (*advanced*)... 35.

Zork III (*advanced*)... 35.

Infidel (*advanced*)... 35.

Sorcerer (*advanced*)... 35.

Deadline (*expert*)... 39.

Starcross (*expert*)... 39.

Suspended (*expert*)... 39.

Invisicues (*hint booklets*) are available for all Infocom games. Specify game... 7.



# No hassle.

## Mark of the Unicorn

Mouse Stampede (*Blow up the mice and watch them turn into cheese. Addictive.*) ..... \$23.

## Miles Computing

MacAttack (*Arcade quality tank simulation, 3-dimensional animation with sound.*) ..... 29.

## Mirage

Trivia (*Over 5000 questions, 5 categories, 3 difficulty levels. Find out what you know, thought you knew or never knew you didn't know. You know?*) ..... 29.

## Penguin

Pensate (*You can control the obstacles, but can you make it to the top of the grid?*) ..... 24.

Transylvania (*Rescue Princess Sabrina in a desperate race against time, and beware of the creatures of the night.*) ..... 24.

The Quest (*Rid the kingdom of a vengeful dragon. Great graphics.*) ..... 24.

## Priority Software

Forbidden Quest (*A truly challenging sci-fi adventure. Vivid graphic art prints.*) ..... 27.

## Scarborough Systems

Run for the Money (*Learn business skills to escape from a strange planet. Best with 2 players.*) ..... 32.

Make Millions (*Enter the world of high finance and make your fortune.*) ..... 32.

## Sierra On-Line

Frogger (*One of the classic arcade-type micro games. For 1 or 2 players.*) ..... 27.

## Soft-Life Corp.

Mac-Slots (*An electronic slot machine. Includes Keno.*) ..... 49.

## Videx

Collection of familiar, entertaining, and challenging games

Funpak ..... 23.

MacCheckers/Reversi ..... 29.

MacVegas ..... 35.

MacGammon/Cribbage ..... 29.

## HARDWARE

### Assimilation Process

Mac Daisywheel Connection (*Two disks, cable and set up guide for connecting Mac to a daisywheel printer.*) ..... 75.

### CompuCable

Mac to Hayes Smartmodem Cable (9 ft. length.) ..... 19.

Mac to Epson FX/RX printer cable ..... 19.

### Creighton Development

ProPrint (*Software for connecting Mac to daisy wheel printer.*) ..... 49.

ProPrint w/8 ft serial cable ..... 74.

ProPrint w/2 8 ft serial cables & A-B switch 149.

## Curtis Manufacturing

Diamond (*Switched 6 outlets*) ..... \$39.

Emerald (*Switched 6 outlets; 6 ft cord*) ..... 49.

Sapphire (*Switched 3 outlets;EMI/RFI filtered*) ..... 59.

Ruby (*Switched 6 outlets;EMI/RFI filtered; 6 ft cord*) ..... 69.

## Elephant

Imagewriter Ribbons. (*For superior Imagewriter printing.*) ..... 5.

## Epson

RX-80 with GRAFTRAX-Plus ..... call

RX-80 F/T with GRAFTRAX-Plus ..... call

FX-80 with GRAFTRAX-Plus ..... call

RX-100 with GRAFTRAX-Plus ..... call

FX-100 with GRAFTRAX-Plus ..... call

## Hayes Microcomputing

Smartmodem 300 (*Works with Macterminal*) ..... 197.

Smartmodem 1200 (*Works with Macterminal*) ..... 489.

CompuCable's Mac to Smartmodem cable 19.

## Hanzon

Universal Card (*Serial interface board that gives your Epson FX or RX series printer Mac compatibility.*) ..... 116.

## I/O Design

Padded Imagewriter Carrying Case with shoulder strap. Navy blue. .... 49.

## Kensington

Dust Cover (*Covers both Mac and keyboard.*) ..... 10.

Imagewriter Cover (*Protection for your printer.*) ..... 10.

Universal Printer Stand (*The perfect companion for your printer.*) ..... 19.

Swivel (*Lazy Susan style base for your Mac.*) ..... 23.

Disk Case (*Holds 36 Mac disks.*) ..... 23.

Surge Suppressor (*Replaces Mac's power cord and protects from surges and line noise.*) ..... 39.

Starter Pack (*Swivel, surge suppressor & dust cover in one package. Best buy.*) ..... 54.

Modem (*A 300 baud portable modem. Complete with case and cables. 5 year warranty.*) ..... 99.

## Innovative

Flip & File (*Holds 40 Mac disks.*) ..... 23.

## Microcom

MacModem (*Including software, upgradeable to 2400 baud.*) ..... 419.

## Micron Technology

MicronEye (*Image sensor translates anything it sees into MacPaint for enhancement, printing, or storage. Let your Mac see what's going on.*) ..... 329.

## Pacific Wave

Flip Sort Micro (*Holds 40 Mac disks*) ..... 17.

## BASF

Disks 3 1/2" Micro Floppy (*Box of 5*) ..... 19.

## MAXELL

Disks 3 1/2" Micro Floppy (*Box of 10*) ..... \$35.

## Fuji

Disks 3 1/2" Micro Floppy (*Box of 10*) ..... 37.

## Memorex

Disks 3 1/2" Micro Floppy (*Box of 10*) ..... 39.

## 3M

Disks 3 1/2" Micro Floppy (*Box of 10*) ..... 39.

## Verbatim

Disks 3 1/2" Micro Floppy (*Box of 10*) ..... 39.

## Intermatrix

Macphone (*The complete computer phone, with clock calendar, memo pad and auto dial. Keeps detailed log of the length of all calls.*) ..... 169.

## Microsoft

Apple-Mac Book (*The much-acclaimed Mac reference book. An instant classic.*) ..... 14.

Presentation Graphics Book (*For getting the most out of Microsoft Chart.*) ..... 14.

MacWork/MacPlay (*Twenty original ideas for home and business. See what's really possible between you and your Mac with MacWrite, MacPaint, and Multiplan.*) ..... 14.

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- 120 day guarantee on all products.\*
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\*Defective software replaced immediately. Defective hardware replaced or repaired at our discretion. Some items have warranties up to five years.



tional data filing system.

Since the dawn of the computer revolution, there has been talk about information "publishing" on computers, but the tools for effective development and delivery of computer-based information have been lacking. Filevision takes a big step toward filling the tool gap that has kept subject-matter experts from delivering on the promise of the computer as an information appliance.

Could a set of Filevision drawing files be a commercial product? There is certainly precedent for marketing computer-based documents. Spreadsheet templates, such as the real estate analysis templates that are available for Visicalc and Lotus 1-2-3, are one such example. Given the right vertical market—a group that needs the information an expert can provide—and the right pricing, well-made Filevision documents could be a commercial success.

If you have an impressive Filevision application, you might want to submit it to the first Filevision contest. The grand prize is a 512K Mac with an 11M-byte Corvus Omnidrive. Three first prizes (512K upgrades or wide-carriage Imagewriters), three second prizes (external

disk drives or modems) and three third prizes (Mac carrying cases) will also be awarded. All entries will get a disk with the winning drawing files. Send your entry with the release form from *Filevision Magazine*, which is sent to all registered Filevision owners. The contest deadline is February 15.

In the coming months, this column will cover methods for getting the most out of Filevision. It will describe these techniques using example, many supplied by readers who have developed particularly interesting or valuable applications. What do you know more about than most people? Could you develop a set of Filevision drawing files that cover the topic? If you have a noteworthy application, please write to me about it at P.O. Box 7000-417, Redondo Beach, CA 90277.

*Allen Munro is a member of the research facility at the University of Southern California. He is the author of **Mac Power: Using Macintosh Software**, published by Scott, Foresman and Company, January 1985.*

## Two Great Reasons For Using A Macintosh™

### MacManager™

Do you have what it takes to excel in the world of business? Sit down at your desk in the MacManager office and find out. Hone your business skills by planning a strategy that will rocket your company to the top and leave your competitors in the dust.

MacManager is a competitive business simulation that combines the fun of a game with the excitement of big business decision-making. Up to nine human or Mac-controlled players can compete for a period of one quarter to eight years.

### DeskToppers™

DeskToppers is a set of four desk accessories for use with virtually any Macintosh program. Copy DeskToppers to all your applications disks.

MacManager and DeskToppers are available now for \$49.95 each. See your Macintosh dealer for a demonstration or order directly by calling (800) 622-4070; (in Illinois call (800) 942-7317).

HARVARD ASSOCIATES, INC., 260 BEACON STREET, SOMERVILLE, MA 02143, (617) 492-0660, TELEX 880 792





# MOCKING THE MAC

## A Look at MockTerminal, MockWrite, MockPrint And the Mac Honor System at CE Software

By Jerry Daniels, Director of the Mac Underground

It was a sunny afternoon in the Midwest when I stumbled into the sci-fi/fantasy world of CE Software and a programmer who was convinced that the Macintosh was a multi-tasking machine.

CE Software is housed in the upper reaches of a 9,000 square-foot, A-framed computer store in Des Moines, Iowa called the Computer Emporium. Don Brown is the major programming talent found in the eaves of the massive A-Frame. Like most good programmers under 30, he's got a healthy wizard fantasy. Unlike most wizards, Don has a desk accessory fetish.

I never knew what a desk accessory was until I met Mr. Brown in his brown (what else?) three-piece suit that was covered with medals and badges. Don looked as if he had been fighting in the micro-trenches banging bits—and got his due recognition for it. After 10 minutes of techno-speak, his interpreter Dave Reed arrived and starting translating.

### ABOUT DESK ACCESSORIES

Desk accessories are funny little programs (8K limitation) written exactly in 68,000 assembler that lie beneath the Apple logo in the upper left corner of each and every Mac screen. The world beneath the logo is a world of low expectations and high fantasy. Nobody ever expects anything as useful as the scrapbook or as exotic as the Executive Decision Maker (makes random decisions for you—I Ching style).

"He [Don] thinks the Mac is a multi-tasking machine and desk accessories are the first step!" Dave Reed enthused, translating a sector of Don's techno-speak into Mac-speak. I was still trying to figure it all out.

After buying a copy of Don's desk accessory mover (for \$15!) and using it for a week to rename, install, and delete all kinds of desk accessories, I finally knew what he meant! I felt like my Mac had become a poor man's Lisa which IS a multi-tasking machine.

My head filled with visions and suggestions for new, exciting desk accessories. I scuttled right back up to Des Moines. I told Don that he really had something here with these desk accessories. "I know" was his response. He then revealed to me (in true wizard fashion) his next, deeper level of desk accessory fantasy—the Mock series.

These were accessories that really challenged the role of desk accessories. They "mocked" the Apple software products they were named after—MacWrite and MacTerminal. After a brief demonstration of a fine little text editor (MockWrite), a terminal emulator (MockTerminal), and a print utility that could print those huge text files from downloaded Source and CompuServe

sessions (called MockPrint), I had a healthy respect for Don's wizardry.

After begging and then taking solemn oaths (with hand atop Don's Mac), I received evaluation copies of MockTerminal, MockWrite, and MockPrint. The rest is history—I can now move around textual information from within any application without ever seeing the familiar gray of my Mac desktop.

### A MOCK GUIDED TOUR

When I first got home I installed the MockPackage and decided to try each part of it while I was in MacPaint. Since I hadn't picked up my mail from the Source yet that day, MockTerminal was my first choice of the three Mocks. Upon selecting it from the Apple logo menu (desk accessory menu) the word "Terminal" appeared to the right of the last MacPaint menu item. This was a pull-down menu that controlled the new screen that now appeared on top of my MacPaint screen.

The MockTerminal screen told me that Don and CE Software had created this little gem and wouldn't mind getting paid for it if I continued to use it. (More about the Mac Honor system in a minute!) A cursor bar flashed patiently—awaiting my slightest menu command. The newly installed MockTerminal menu let me go 300 or 1200 baud; full or half duplex; dial up to seven numbers until I got an answer (auto-redial!); and even let me record or "download" to disk! After logging off the Source, I turned the "record" feature off, clicked the close box, and watched my MacPaint menu return



to normal. No evidence of any Mocking!

I uncovered some of this terminal's limitations, too. At 1200 baud the recording mechanism would periodically drop a few characters being transmitted. On non-Hayes type modems such as the Anchor Volksmodem and the Novation J-Cat the auto-dial was inoperative. Don has since written a version of MockTerminal that uses the printer port instead of the modem port—an important addition for most hard disk owners! I believe he has also solved the 1200 baud downloading problems, too.

My first recorded Source session was long—100K, and I didn't have a 512K Mac at that time so MockPrinter came in pretty handy. MockPrinter didn't add anything to my MacPaint menu as MockTerminal did. It just showed me a mini-finder (dialogue box with a list of files that it could print) and let me choose a file to print in draft style. I chose "Source 9-12" and within seconds ASCII characters flew out of my Imagewriter's print head. I now had a hard copy of my entire session.

After reading my Source messages, I decided it would be neat to write some responses to some of my buddies with MockWrite and then send them with MockTerminal—without leaving MacPaint! I was trembling with excitement and anticipation but still managed to tickle the keys and click the mouse.

MockWrite, like MockTerminal, added the word "MockWrite" to the right of the last MacPaint pull-down menu and created a new screen. This screen was different from the MockTerminal screen—it had a grow box in the lower right corner for re-sizing and a scroll bar along the right side for scrolling through the text.

I started writing replies to my E-Mail and was delighted to see 9-point Monaco appear on the screen at RAM speeds. I was double delighted when my words automatically wrapped around my screen limitations. Upon resizing the MockWrite screen (actually a full-fledged window) the words re-wrapped! All the MacWrite editing features were there—double click to select words, shift-click for continuous selecting.

MockWrite Menu items let me: open new files; open a concurrent file to copy from; "Save" and "Save As..."; print in draft; find words (command-F optional); and find the same word that next appears (command-S optional). The last item on the menu, as on MockTerminal, was an "About" command that told all about this little accessory, who wrote it and how to buy a license for it via the Mac Honor system. (The Mac Honor distribution system will be discussed real soon now!)

Before returning to MockTerminal, I cut each message from my MockWrite document into the scrapbook—one at a time. Once back within the now familiar confines of the MockTerminal screen and logged back onto the Source, I "pasted" (uploaded) my messages onto the MockTerminal screen and thus into each of my friends' E-mailboxes.

Although the MockPackage doesn't always operate flawlessly on a hard disk, it is well worth four or five times the \$25 CE Software charges. Don and Dave have also written 31 pages of illustrated documentation to explain installation and running of all three Mocks.

## MAC HONOR—FINALLY

Dick Skeie runs the Computer Emporium and acts as business manager for CE Software which shares part of the Emporium's floor space as well as part of its name. Dick spent an afternoon describing the business side of CE Software's distribution system—the Mac Honor™ system. After hearing the mathematics and ideological ramifications of it, I became convinced that Mac Honor will soon be the choice of many programmers—just as self-published books are a

popular alternative for writers of prose and poetry.

The Mac Honor system relies upon a commodity that the Judeo-Christian world has an abundance of—guilt. CE Software puts its programs up on Compuserve, sends notifications to all the user groups, magazines, etc. to make its program not just available but "copyable"! They encourage you to take the "puppy" home with you.

Once home and snuggled up in your disk drive, a CE Software program uses every opportunity to remind you that Don and CE are trusting you and counting on you to pay for this program if you continue to use it. Done has even put a four-frame scrapbook on all his program systems that shows you: 1) a drawing of Don, 2) an adorable drawing of his dog, Shepp, 3) notification that Don and Shepp will go hungry if you don't buy a license for this program, and 4) a picture of Shepp looking real sad because he's hungry.

It works and I like the way it works—I like helping people out. I hate helping im-persons (like large megacorps) line their pockets. I don't mind the guilt—I'm Catholic.

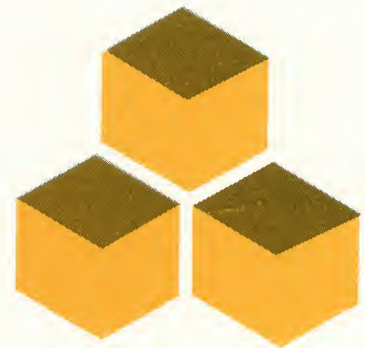
Mac Honor makes good business sense, too:

1. There's no promotional or distribution expenses involved and therefore no risk capital needed.
  2. A \$50 dealer-sold program will have to outsell a \$15 Mac Honor program by 5 to 1 in order to achieve the same profits to the programmer.
- It takes a couple of months to get your program out "there" being copied by eager Mac users—then the money starts coming in.

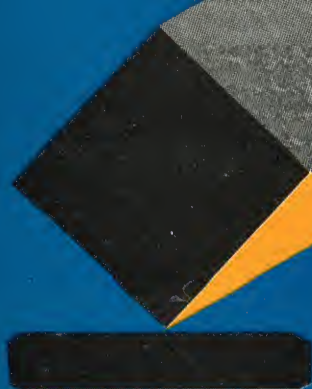
So go ahead, help Don and his dog Shepp out—send a disk, a self-addressed stamped envelope, and a request for the MockPackage to:

CE Software  
801 73rd Street  
Des Moines, Iowa 50312  
(515) 224-1995

Don (not Shepp) will see to it that you get a copy of these powerful little programs.







# MAC-STUFF

## New Products

**THE DESK ORGANIZER**, Warner Software, Inc., 666 Fifth Avenue, New York, NY 10103 212/484-3070. Touted as "not just a set of tools," but rather "a complete desk management system," The Desk Organizer appears to more than live up to it's billing, performing handily more desk management functions than any similar product that we've seen to date; perhaps more importantly, it will operate concurrently with almost any other Macintosh software. The package features an exceptionally well implemented Macintosh interface, an "idea tracking system," a telephone index and auto dialer, a small (memo/letter sized) word processor, a calculator with "paper tape," 25 built-in calculation formulas, calendar, alarm clock, and data file. It runs on both the 128 and 512K Macintosh, and since it runs concurrently (or alongside) other applications, it's much like providing your Mac with a private secretary. A "gem" of software design.

**MOM:** The Macintosh Office Manager, OmniSoft International, 4 Mary Lane, Melville, NY 11747 516/367-8618. How about an Integrated Word Processor, Spelling Checker, Database Manager, Charting, Mail Merge, Communications, and Spread Sheet to run on the 128K Macintosh at a suggested retail of \$395.00; that's the claim for OmniSoft's Macintosh Office Manager (MOM) which is scheduled for release "during the first quarter of 1985" . . . according to the developer. OmniSoft sees

their MOM as competitive with Lotus' Jazz (and vice versa!), and while we're a bit skeptical (not having seen MOM) we hope that it provides a quality integrated package accessible by 128K Mac users. We also look forward to trying it out and reporting our own findings to our readers.

**GALLERY** Accounting & Business Management System, Micromax Systems, Inc., 6868 Nancy Ridge Drive, San Diego, CA 92121 619/457-3131.

We've been watching and waiting for the release of the Gallery accounting system's first module ever since we first saw it in a preliminary version back in August when it seemed to be the answer to a small businessman's dream . . . a sophisticated accounting and finance package for the Macintosh. We're still waiting although, as we go to press, release of the first modular package, Finance (including General Ledger, Accounts Receivable, Accounts Payable and Cash Disbursement/Optional Limited Payroll), has been announced for December '84. Eleven additional, integrated modules are scheduled for release in 1985.

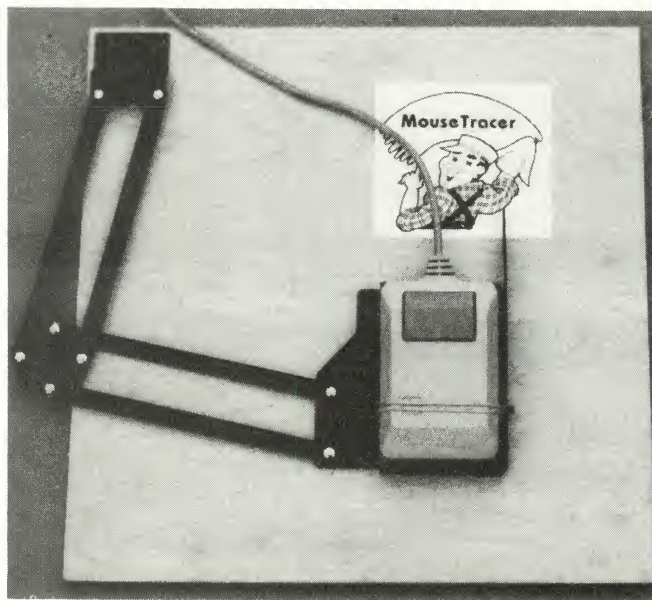
The Gallery Finance package itself supports a user defined chart of up to 500 accounts, next period entries, trial balance, custom profit and loss statements, balance sheet, period to date balances, open items, aging of receivables, cash or accrual basis, cash receipts, credit history, customer data, sales tax

reports, recurring receivables, vendor information, cash flow reports, partial payments, credit/debit memos, recurring payables and more. Minimum configuration is 128K Macintosh with an external drive. Suggested retail is \$795.00.

**Front Desk**, Layered Incorporated, 85 Merrimac Street, Boston, MA 02114 617/423-9041.

A "different" approach to office resource management, Front Desk is designed to maintain schedules for up to 15 resources (people, places or things) and report/project hours/revenues for various periods of time. It utilizes daily, weekly and monthly calendars, as well as a selectable "All days for a specific day of the week" for a given resource. Front Desk is "customizable" to the user's own business/practice, and detailed set up instructions are provided for Accounting Firm, Architectural Firm, Consultants, Contractors, Dental Practice, Educational Facilities, Executives, Law Practice, Medical Practice, Recreational Facilities and Sales Management applications. A manual of "Creative Applications For Front Desk" is also included to assist in customizing an application. Our limited experiments with the program have convinced us of the utility of the program; its "polish" and sophistication will be discussed in an upcoming review. Meanwhile, if you need a "scheduling tool," check it out at your dealer's.





**CP/M FOR THE MACINTOSH**, IQ Software, 2229 East Loop 820 North, Fort Worth, Texas 76118 817/589-2000.

As we understand it CP/M For The Macintosh ports over existing CP/M based programs to the Macintosh, enabling it to run such programs as Wordstar, DBase II and literally thousands of others. Apparently the program represents (is!) an alternative operating system designed by Digital Research to run on the 68000 based Mac. Sounds ambitious, but we're planning a thorough review in a future issue of The MACazine. Suggested retail \$395.00, and available now, according to IQ.

Concurrent DOS which will "allow users to run up to 5 CP/M programs at once" on the Macintosh is the next release promised by IQ Software . . . for 1985. Some encore!

**Da Poma GB**; Gradebook Emulation For The Macintosh, Da Poma Inc., P.O. Box Drawer H, Hondo, TX 78861-0240 512/426-5932.

With shipping promised "in time to start the Spring '85 semester," Da Poma GB claims to be the first and best gradebook program on the Macintosh. The University version, to run on the 512K Mac (optional) will handle a University sized class for each subject, and allows for student scores to be weighted individually or by type, adjustable grade breakpoints, and tracking of raw scores, student-grade and class grade lists. Suggested retail \$150.00.

**MOUSETRACER**, Brimark Innovations, 9821 Yolanda Avenue, Northridge, CA 91324.

The photo is self explanatory . . . the unit includes the board (12" by 12"). It's available from the developer for \$34.95 plus \$2.00 postage and handling.

**MacGrid**, Diablo Valley Design, 4103 Hidden Valley Road, Lafayette, CA 94549 415/283-1082.

A case of "less if more," MacGrid is a clear vinyl "grid" overlay on which to trace your artwork to be transferred into a MacPaint document; precisely, and with whatever level of detail you wish. The comprehensive disk-based tutorial covers it all! It works with the most erratic mouse, and allows for much more personal artistic control than digitizers, while making possible an incredible level of detail. Want super graphics . . . check out MacGrid.

**MacInTax**, SoftWeave, 400 Mobil Avenue, Bldg. D, Suite C, Camarillo, CA 93010 805/388-2626.

Tax time! Wish you could get help from the Mac this year. MacInTax may be for you . . . it looks like it's right for the "rest of us." The tax forms (1040, Schedules A, B, D, E, G, W, 2119 and 2441) appear on the screen, point and click to enter amounts, calculations are automatic, all data is saved to disk, and the program prints directly onto the appropriate IRS forms. In addition, worksheets are available for each line, and the COMPLETE IRS instruction booklet is available for each line item at a double-click. Suggested retail \$70.00.

**Shatter**, First Comics, Inc., 1014 Davis Street, Evanston, IL 60201 312/864-5330.

The "first professional comic book produced entirely on a personal computer . . . the Macintosh", "SHATTER" must be seen to be believed . . . it literally pushes back our concepts of the limits of MacPaint . . . what limits!? The full "painted-color booklength special edition" will debut on February 28, 1985; a black-and-white preview of the artwork is shown below. This one is likely to become a bona fide collectors's item. Retail should be \$1.75 in stores / \$2.25 by mail.

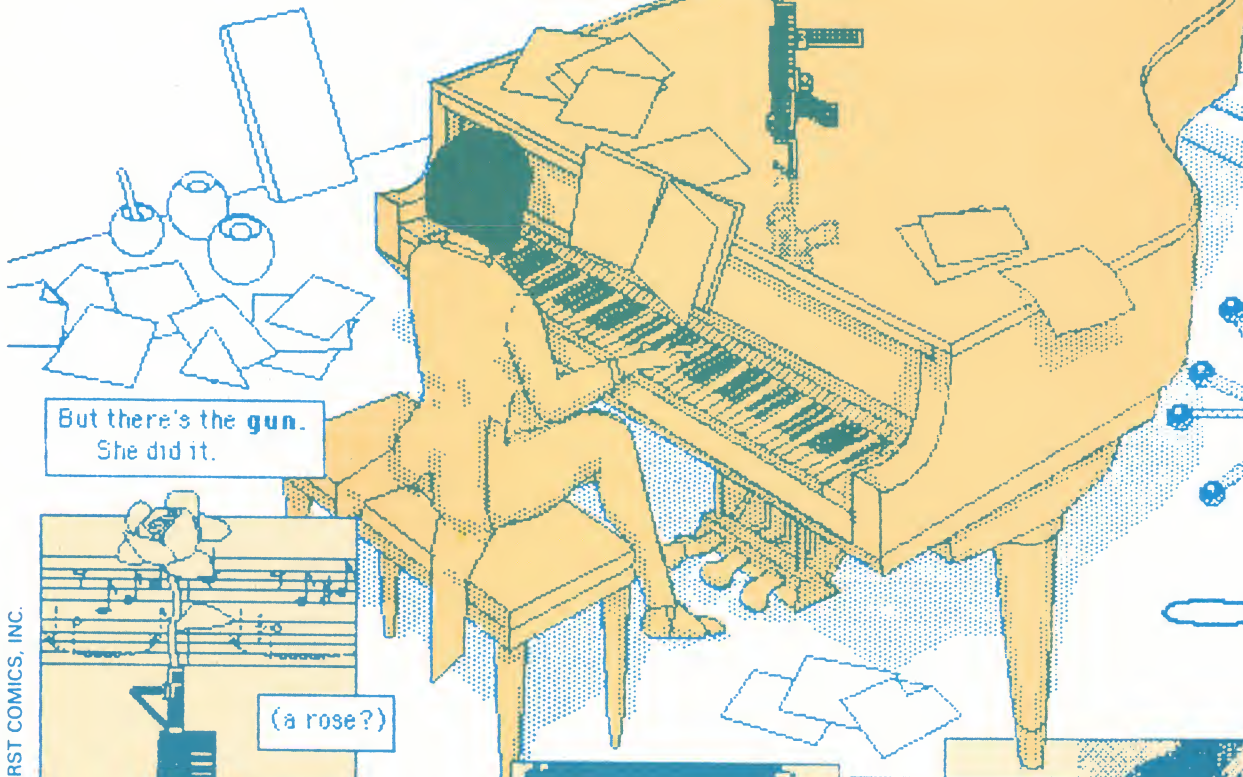




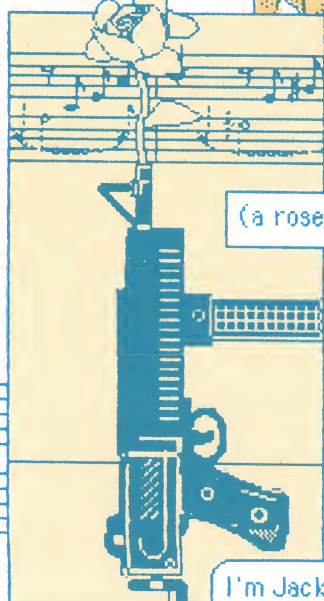
It's her.

And it's--  
beautiful.

As if the noise  
of the city--  
of my life--  
were suddenly  
turned  
off.



But there's the **gun**.  
She did it.



(a rose?)

I'm Jack Scratch,  
registered police,  
and you're under  
arrest for murder.



Will you **stop  
playing?** You're  
under arrest!







# DEVELOPER PROFILE

## The Agent's Agenda

By Bob Jacob

Apple has done it. They've met their goal of selling 250,000 Macs in 1984, thereby doing what many analysts said was impossible—establishing a new standard for personal computing in the face of IBM's virtual hegemony over the marketplace.

The stakes were high, especially after the failures of the III and the Lisa, but Apple was forced to either do the dramatic or become yet another supplier of MS-DOS clones. The consumer has made his decision . . . and Apple's gamble has paid off.

The success of the Macintosh has created exciting opportunities, not only for Apple, but also for software developers and publishers. The Robert Jacob Agency represents developers in publisher negotiations. We've met many "movers and shakers" in the industry and plan on sharing our experiences with you.

The Agent's Agenda will bring you up to date on who's writing what for the Mac. We'll throw the spotlight on Mac oriented software publishers and give a little recognition to that often overlooked and misunderstood hero of the computer revolution . . . the programmer.

Readers who are serious about writing software for publication should definitely consider joining the Software Entrepreneur's Forum. SEF is a Silicon Valley based organization of small developers and publishers, who have banded together to share useful information and contacts.

In October I was invited to speak at "Agents Night". I and three other agents (Bill Gladstone, Mike Larson and Andy Goldberg) each gave a talk discussing the merit of retaining an agent and then the floor was thrown open for questions. I was extremely impressed by the caliber of give and take and am certain that some of the members will be heard from in this industry.

Bill Parkhurst heads up the Mac Special Interest Group at SEF. Bill, 26, recently wrote the graphics and animation routines for Living Videotext's Think Tank. He is currently working on a series of graphic enhancements for MacPaint.

The Mac SIG meets once a month and usually draws at least sixty programmers. Although any SEF member is eligible to join, Bill feels that the SIG is primarily geared towards experienced programmers who are new to the ways of the Mac.



Bill saw his first Mac at last year's SoftCon. He immediately dropped his IBMPC projects and purchased a Macintosh. Bill started the Mac SIG in mid-1984 and has gotten cooperation from Apple's Guy Kawasaki and Bill Atkinson.

For membership information of SEF and the Mac SIG please contact:

Barbara Cass  
Association Manager  
P.O. Box 61031  
Palo Alto, CA 94306  
(415) 854-7219

The wait and see attitude concerning the Mac that some leading software publishers have adopted has lengthened the window of opportunity available to small and startup publishers. A good example is Main Street Software. The Sausalito based publisher of Main Street Filer was limping along with their IBMPC version. When they released the Filer on the Mac sales and profits took off.

Mark Bell, newly hired vice president of marketing, is bullish about Main Street's chances for remaining a major player in the Mac universe. He recently confided that the company has a number of state of the art business packages under development that will "blow the market wide open".

Brainworks, the brainchild of Sherwin Steffin, is another Mac oriented publisher. Steffin, the founder of Edu-ware Services, is a veteran of the software wars. He is a champion of "discovery learning", educational programming which teaches you how to think.

Steffin's initial products include Chip Wits, a robot construction game; Tele Chess, which allows two players to play chess over a modem with full graphics; Torpedo Run, an exciting WW II submarine simulation; and Brain Train, a sort of intellectual arcade game, which measures and improves left and right brain function.

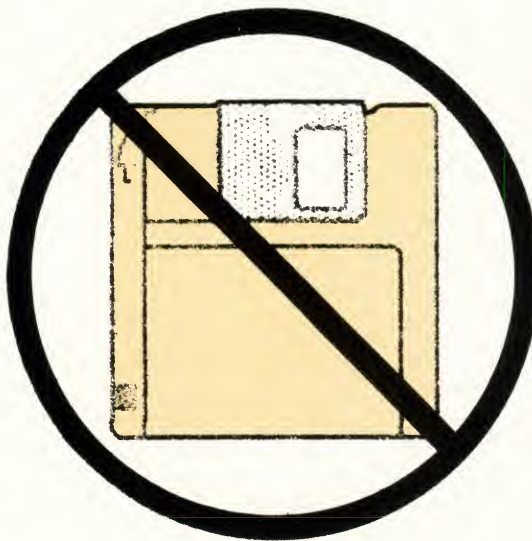
There is a dark cloud on the horizon, however, and it's the blight of Piracy. Piracy was one of the major reasons why software publishers abandoned the Atari computer. Someone invented a device that would copy virtually all copy protected Atari software. End result . . . dead machine.

While piracy exists on all computers, I suggest that it is a particularly worrisome problem on the Macintosh. The fact is the installed base of users, while excellent for a new computer, is still miniscule compared to the IBM on the business side and The Commodore 64 on the home front.

When you combine the small total potential audience with the conservative attitude that many publishers have regarding the Mac you can begin to see the nature of the problem.

Several new copying utilities have appeared that purport to copy all copy protected Mac software. Assuming that they can, (and I have no reason to doubt their claims) then unauthorized duplication of software will kill this machine faster than Big Blue. The biggest public relations problem that Apple has had concerning the Mac has been the scarcity of third party developed software. Remove the profit incentive and no publisher in his right mind would develop programs for this machine. No programs . . . no Macintosh.

The next time you're at the local Mac Users Group meeting and someone wants to dupe your copy of the hot new program, guard your own self interest and tell him NO. You'll be doing the rest of us a favor.



**NO DISK COPY**



# MACLABELER COMES UP TO SPEED

By Mary Jane Mara

MacLabeler is the noteworthy brainchild of Ideaform, Inc. (P.O. Box 1540, Fairfield, Iowa, 52556) and retails for \$49.95. Its claim to fame is not so much that it solves the problem of disk organization (which it does)—but that it does so with such speed, elegance, and sensitivity to user needs.

Boot up MacLabeler and in a matter of seconds (six to be exact) your Mac spits out the master and asks for a disk to label. Feed in any disk and micro-seconds later it ejects—leaving behind a complete list of disk contents appearing simultaneously along the bottom half of the screen and in the "transfer window" in the upper right-hand corner. In both places, folders are in bold print with documents assembled in order beneath.

The "directory window" at the bottom of the screen lists files by name, type, size and date. The transfer window lists those same files by name and size. By activating either the directory window or the transfer window and pulling down the FORMAT menu, you can ask for folders only, documents only, or both. The SORT menu allows you to arrange titles in alphabetical order, by file type, by file size, or by document create-date. These windows can also be scrolled.

Once you've sorted the titles in the transfer window to your taste, you can create a label by moving them to the upper left-hand "label window" all at once, or one at a time in any order you desire. The label window graphically represents a portion of the final disk label, and is surrounded by a patterned edge. With eight patterns to choose from, you can pick a separate pattern for program disks, data disks, work disks, back-up disks, etc.—the better to distinguish one type from another.


Pattern and data in place, you pull down the PRINT menu and select the label option (a directory print option is also available). Another screen appears with a drawing of a printer showing exactly how to insert the labeling material. This screen also provides an option that lets you print the label so it reads from top to bottom on the disk (the metal end being the top), or reverse it and print bottom to top.

There are two suggested materials for labeling: A standard-sized sheet of crack'n'peel sticker paper (samples included with program), or any paper affixed to the disk with glue-stick. When you've loaded up your printer with the chosen medium, hit the PRINT button and your label instantly begins printing. Yet long before the label is done, your screen is free to process another disk. (Disk processing is something

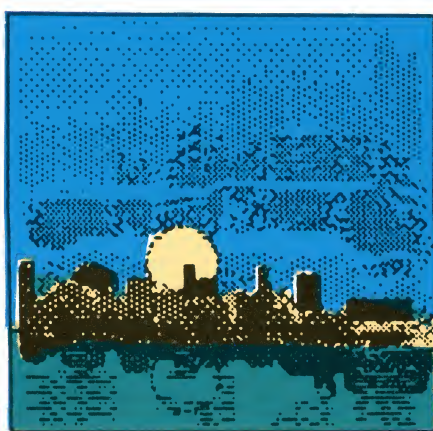
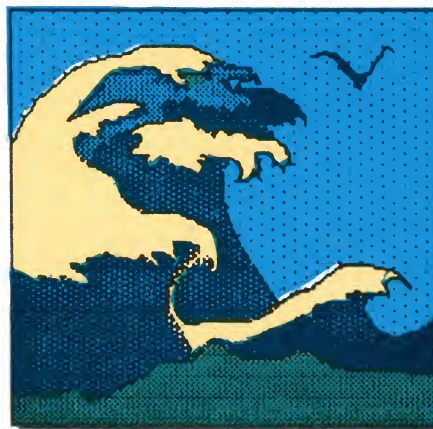
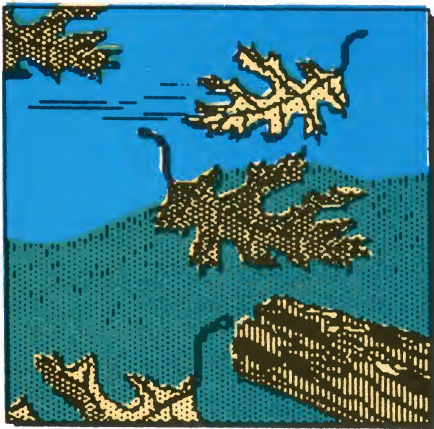
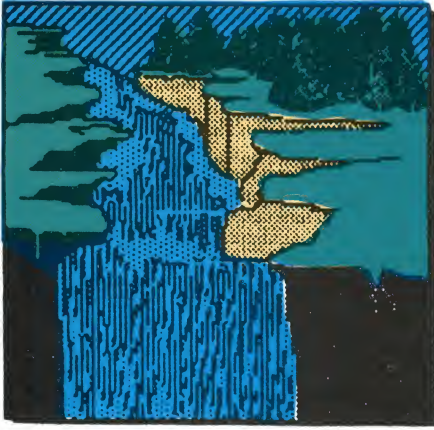
MacLabeler is expert at—it processed thirty of mine in a matter of minutes.)

The printed labels must be scissor cut and here's a tip: whether you use crack'n'peel or paper'n'glue, if you pre-fold your labels before you wrap them around the disk—they'll stay wrapped. By the way, the wrap-around feature is a great convenience. With clearly-typed titles appearing along the skinny edge of your disks (as well as on the front and back), a Mac stack is as easy to peruse as a shelf full of books.

The major complaint against label programs is that labels have to be re-done too often to keep up with the frequent addition and subtraction of material. If you wish to avoid frequent re-labeling, first take your disks and organize similar document types into major categories and put them in folders. Then, if you print your labels listing only these major folder headings (which rarely change), it'll be a long time before the need to re-label rears its ugly head.

Once you've gotten your disks (and therefore your life) in order, you can thank MacLabeler for being one of the fastest, best-designed Mac programs to date. At Comdex, it drew quiet raves from some Apple greats, including Guy Kawasaki. I asked the ubiquitous software evangelist if he'd care to comment for this article, and he said, "MacLabeler is an extremely useful utility application for the Macintosh. It makes labels and directories interesting and fun...*for the rest of us.*" (Now where have I heard that before?) 







# Review: Forecast by Monogram

by John Venable

'Tis the season when anxiety about the size of one's tax bite reaches a fever pitch. As the ubiquitous Form 1040 begins to appear in mailboxes, taxpayers across the country start exhibiting erratic behavior. Some chant incantations to various and sundry gods, while others fall into a somnambulistic, perhaps catatonic, state. A few otherwise law-abiding citizens start to seriously consider tax evasion as a viable option.

If you see your own behavior described here, you might consider purchasing Forecast, a powerful software tool for developing personal federal income tax strategies. With Forecast, you can create any number of tax scenarios and predict your likely tax liability up to four years ahead. You can view and compare these scenarios on screen, make "what if" adjustments, and print the results. The program operates either as a "stand alone" tool or in conjunction with its sister program, Dollars & Sense. Forecast will run on a 128K Mac, and Monogram strongly recommends the use of a second disk drive to avoid excessive disk swapping.

Once again, Monogram has shown its prowess at delivering quality software in slick packaging. Forecast is well designed, and makes excellent use of the Mac's windowing capabilities. A seemingly unlimited number of full-featured windows can be displayed, repositioned, and resized to show different data pertaining to your tax situation. The manual, not much larger than a disk, is packed with a helpful tutorial, reference section, and large index. Also included is an extensive section on tax information which describes the contents of each tax item and the logic behind the calculations made by the program.

## A Sample Case

To demonstrate the features available from Forecast, I'll use the example of Fred and Mary Smith, an upwardly mobile couple earning about \$80,000 a year. Mary's free lance writing business has really taken off this year, and they are facing some difficult choices. Several years ago, they were fortunate to buy a \$10,000 taxable bond yielding 14%, and now it has appreciated in value by about \$2,000. They have yet to establish an IRA, and Mary is eligible to establish a Keogh plan. It's now toward the end of the year, and the Smiths realize they must do something to cut their tax bill. They are contemplating selling their bond, and using the proceeds to establish IRAs and a Keogh plan. What impact will this have on their tax bill?

The Smiths must first input an accurate assessment of their current tax situation which will serve as the baseline data from which "what-if" analyses will be performed. Selecting the File Adjustments option displays an entry form with the detail items which comprise a personal tax return (see Figure 1). Entering and editing the baseline, data is made easy using standard Macintosh routines.

When finished, the program will return to the main worksheet screen where the data has been summarized and the results of tax computations are displayed (Figure 2). Each row corresponds to summary items found on Form 1040, and the five columns correspond to different tax years or scenarios. Across the top of the screen are displayed the tax file and study in use, the total tax liability computed for the case (column) being referenced, and the net change in the tax liability caused by your last change to the data. Note that all five cases have been filled with identical data, ready for analysis.

Supporting each summary item is a detail window (similar to the various schedules attached to your return) which can be displayed by double-clicking on a particular summary cell. The Itemized Deductions detail window, shown in Figure 3, contains a list of allowable deductions and the amounts entered thus far. Note also that the summary result on the main worksheet is not merely a summation of the individual items in the detail window. For example, only medical expenses exceeding 5% of the adjusted gross income

File Study Case Reports Windows

Tax Data File		File Adjustments		
Tax Liability	Tax Category	File Adj.	From Asset	Total
<b>Form Names</b>	<b>Years and Salaries</b>			
	Taxpayer's Wages		0	30,000
	Spouse's Wages	0	0	0
<b>Filing Status</b>	<b>Interest and Dividends</b>			
<b>Index Rate</b>	Dividends	500	0	500
<b>Marginal Tax R.</b>	Interest	1,400	0	1,400
<b>Tax Calculation</b>	Taxexempt Interest	0	0	0
<b>Wages and Sala</b>	<b>Business Profit-Loss</b>			
<b>Interest and Div</b>	Gross Receipts	0	0	0
<b>Business Profit</b>	Cost of Goods	0	0	0
<b>Capital Gains-L</b>	Business Deductions	0	0	0
<b>Supplemental In</b>	Spouse Gross Receipts	50,000	0	50,000
<b>Miscellaneous I</b>	Spouse Cost of Goods	6,000	0	6,000
<b>Income Adjustm</b>	Spouse Business Deductions	2,000	0	2,000
<b>Adjusted Gross</b>	<b>Capital Gains-Losses</b>			
<b>Personal Exemp</b>	Short Term Sale of Home	0	0	0
<b>Itemized Deduct</b>	Long Term Sale of Home	0	0	0
	Other Short Term	0	0	0
<b>Taxable Income</b>				
<b>Tax</b>				
<b>Credits &amp; With</b>				
<b>Tax Balance Ow</b>				

Figure 1: Set File Adjustments. This window is used to enter baseline tax data. The individual items correspond to the various components of a personal federal tax return.



are included in the summary total.

Now we are ready to perform the "what-if" as displayed in Figure 4. Case 1 will remain unchanged to use as a reference. Clicking on the Capital Gains line of Case 2 will reveal the detail window in which we enter \$2,000 for long-term gain on the sale of the bond. In the Income Adjustment detail window we enter \$9,750 for the IRA/Keogh deduction. Forecast instantaneously recalculates the new tax liability, which shows a new tax liability of \$12,611, a savings of \$2,796 over the baseline case. At least from a tax standpoint, the contemplated transactions make sense for the Smiths.

Since the Smiths' income has increased substantially in recent years, it might make sense to income average. By selecting the Income Averaging option, the window shown in Figure 5 appears to enter income amounts for the last three years (the fourth year shown exists to allow for a possible change in the tax code). After entering the income amounts, the program determines that about \$30 can be saved by income averaging. That's probably what a good accountant would charge to fill out the schedule.

Throughout this example, I've used the Alternative mode of operation, one of two available. The Alternative mode treats each column, or case, as a stand-alone scenario. This mode is useful for comparing the impact of various tax strategies, i.e., establishing an IRA or making an investment transaction. The Projection mode projects cases for future years; columns are automatically headed by a range of five years. Each case is interdependent, i.e., a change made to one case may well have an impact on another. Under the projection mode, you can "grow" all or selected account items by a specified percentage or amount to see the impact on your taxes.

## Some Advanced Features

If you're lucky enough to have a complicated tax situation, Forecast has several features to deal with them. The program allows you to input carryovers of unused capital losses, investment credits, and contributions. Taxable income from prior years can be entered to calculate taxes using income averaging. The alternative minimum tax computation is automatically made when appropriate. This feature is extremely useful for high bracket taxpayers. Some seemingly attractive tax shelter products generate large amounts of tax preference items, such as investment interest and accelerated depreciation, which may trigger the alternative minimum tax. Forecast shows you the "true" tax savings for your particular situation, not what an aggressive salesman might represent.

Since our taxing procedures have become a political football, potential end users of this program have to be concerned with obsolescence, the possibility of a dramatic change in the way our taxes are computed. Monogram has gone about as far as they can to alleviate this concern by allowing you to change several key parameters. Fifteen percentages, limits, minimums and maximums dealing with various tax computations can be changed for each case. Forecast has a built-in indexing rate to automatically adjust the tax tables by the Cost of Living Index. Sales and Income tax tables can be updated. And certain computed parameters can be overridden. For example, the program will compute a sales tax deduction based upon your gross income, but you are allowed to insert a higher figure if appropriate.

## Dollars & Sense Interface

All of the above describes the use of Forecast as a stand-alone program, and if it did nothing else it would be a very useful tool. But Monogram went one better

File Study Case Reports Windows					
Tax Data File: J&M Smith			Mode: Alternative		
Tax Liability: 15,407			Tax Change: 0		
Pensions?					
Form Names	Case 1	Case 2	Case 3	Case 4	Case 5
Filing Status	Joint-4	Joint-4	Joint-4	Joint-4	Joint-4
Index Rate	0	0	0	0	0
Marginal Tax Rate	38	38	38	38	38
Tax Calculation Method	Schedule XYZ	Schedule XYZ	Schedule XYZ	Schedule XYZ	Schedule XYZ
Wages and Salaries	30,000	30,000	30,000	30,000	30,000
Interest and Dividends	1,700	1,700	1,700	1,700	1,700
Business Profit-Loss	42,000	42,000	42,000	42,000	42,000
Capital Gains-Losses	0	0	0	0	0
Supplemental Income	0	0	0	0	0
Miscellaneous Income	0	0	0	0	0
Income Adjustments	-3,000	-3,000	-3,000	-3,000	-3,000
Adjusted Gross Income	70,700	70,700	70,700	70,700	70,700
Personal Exemptions	-4,000	-4,000	-4,000	-4,000	-4,000
Itemized Deductions	-17,308	-17,308	-17,308	-17,308	-17,308
Taxable Income	49,392	49,392	49,392	49,392	49,392
Tax	15,407	15,407	15,407	15,407	15,407
Credits & Withholding	-5,545	-5,545	-5,545	-5,545	-5,545
Tax Balance Owed	9,862	9,862	9,862	9,862	9,862

Figure 2: The Main Worksheet. Forecast displays 5 separate cases, or scenarios. The summary items displayed are automatically computed from the detail data previously entered.

File Study Case Reports Windows					
Tax Data File: J&M Smith			Mode: Alternative		
Tax Liability: 12,580			Tax Change: 0		
Pensions?					
F	Itemized Deductions			Case 4	Case 5
F	Category Name	Case Adj.	Default	Balance	Joint-4
					0
	Medical-Dental Expenses		2,395	2,395	38
	State-Local Taxes	0	2,750	2,750	XYZ Schedule XYZ
	Real Estate Taxes	0	2,700	2,700	0,000 30,000
	Sales-Special Taxes	0	0	0	7,000 1,700
	Other Taxes Paid	0	0	0	0,000 42,000
	Mortgage Interest Paid		13,420	13,420	0
	Misc. Interest Paid		792	792	0
	Cash Contributions	0	0	0	0
	Non-Cash Contributions	0	100	100	0,000 -3,000
	Casualty Losses	0	0	0	7,000 70,700
	Professional Fees	0	0	0	0,000 -4,000
	Educational Expenses	0	0	0	308 -17,308
	Tax Preparation Fees	0	150	150	392 49,392
	Miscellaneous Deductions	0	0	0	15,407 15,407
					545 -5,545
TAX BALANCE OWED		9,862	7,055	9,862	9,862 9,862

Figure 3: Each summary item on the main worksheet is supported by a detail window. In this case the Itemized Deductions detail window is activated, showing the baseline data and spaces to adjust the figures.

File Study Case Reports Windows					
Tax Data File: J&M Smith			Mode: Alternative		
Tax Liability: 12,611			Tax Change: 0		
Income Adjustments					
Form Names	Category Name	Case Adj.	Default	Balance	
Filing Status	Moving Expenses	0	0	0	
Index Rate	Unreimbursed Bus. Exp.	0	0	0	
Marginal Tax Rate	IRA-Keogh Deductions	9,750	0	9,750	
Tax Calculation Methods					
Capital Gains-Losses					
Wages and Salaries	Category Name	Case Adj.	Default	Balance	
Interest and Dividend	Short Term Sale of Home	0	0	0	
Business Profit-Loss	Long Term Sale of Home	0	0	0	
Capital Gains-Losses	Other Short Term	0	0	0	
Supplemental Income	Other Long Term			2,000	
Miscellaneous Income					
Income Adjustments					
Adjusted Gross Income					
Personal Exemptions					
Itemized Deductions					
	-4,000	-4,000	-4,000	-4,000	-4,000
	-17,308	-17,262	-17,308	-17,308	-17,308
Taxable Income	49,392	41,463	49,392	49,392	49,392
Tax	15,407	12,611	15,407	15,407	15,407
Credits & Withholding	-5,545	-5,545	-5,545	-5,545	-5,545
Tax Balance Owed	9,862	7,066	9,862	9,862	9,862

Figure 4: The Income Adjustments and Capital Gains detail windows are activated. To record the Smith's anticipated tax strategy, data is entered in the appropriate space. Forecast automatically recalculates the tax liability after each change, allowing you to see at an instant whether the proposed strategy makes sense.



by providing an interface between Forecast and its sister program, Dollars and Sense. You may load selected account balances directly from your Dollars and Sense file into a Forecast file. Three methods of selecting data are available. The program allows you to load year-to-date data or budgeted amounts. A third option, Percent of Year, will cause the program to perform a straight line extrapolation for a full year based upon the year-to-date data in your Dollars and Sense file. You can further elect to load the balances resulting from all transactions or just those which you have previously flagged as being tax related.

Forecast understandably requires you to tell it which D&S account balances go into which tax categories. This is performed by a rather simple process called "mapping" (see Figure 6). The Dollars & Sense account titles appear on the left-hand side of the screen, and the Forecast tax category titles appear on the right. To categorize your accounts, first click the D&S title and then click the appropriate tax category. For example, Mortgage Interest account would probably go under the Interest Expense tax category. Of course, not all accounts will be tax related, and these are simply skipped.

## Reports

Forecast generates three special reports: Dollars & Sense values, Study Results, and Case Inputs. The Dollars & Sense values display each tax category for a specified case, and the D&S account titles and amounts mapped into each category. If you're reasonably familiar with your D&S accounts, you can tell at a glance if you've properly categorized them, and can determine if any adjustments need to be made. The Study Results report displays the result of the internal calculations made in determining your tax. The Case Inputs report displays the default values for each tax category and any adjustments made to them. Forecast can also print the contents of any active window.

## A Word of Caution

Perhaps in no other type of program is the "Garbage In-Garbage Out" warning more appropriate. If you plan to use Forecast in conjunction with Dollars and Sense, extreme care and discipline must be exercised to make sure all transactions are categorized properly or flagged as being tax-related. If you use the Percent of Year or the Budget method to load your data, recognize that you are dealing with questionable information. It will be reasonably accurate only if the underlying assumptions are correct.

Once your data is loaded into Forecast, you may be tempted to go wild with several "what-ifs" at once, and it's quite easy to lose track of what you've done. Forecast provides a Comment window for each study, and I strongly suggest you make use of this feature to record all changes and their reasons.

## Summary

Forecast would make an excellent investment for accountants, financial advisors, and brokers. The program makes it easy to display to their clients the effects of making investment transactions (buying a tax shelter, switching from taxable to tax-exempt bonds, etc.), setting up an IRA or Keogh plan, and the like. Personal users will appreciate knowing whether they'll get a refund, or have underpaid their taxes. Hopefully, they will have the time and resources to implement tax reducing strategies.

I enthusiastically recommend this program to those with the discipline and interest to manage their tax af-

fairs. Forecast merits an A+ for ease of use (given the subject matter), flexibility, and power. Its \$69.95 price tag is a real bargain for the features it delivers. And the combination of Forecast and Dollars and Sense makes a dynamite package for total financial planning.

Form Names	Case 1	Case 2
Filing Status	Joint-4	Joint-4
Index Rate	0	0
Marginal Tax Rate	38	33
Tax Calculation Method	Schedule XYZ	Income Ave.
Wages and Salaries	30,000	30,000
Interest and Dividends	1,700	1,700
Business Profit-Loss	42,000	42,000
Capital Gains-Losses	0	800
Supplemental Income	0	0
Miscellaneous Income	0	0
Income Adjustments	-3,000	-11,775
Adjusted Gross Income	70,700	62,725
Personal Exemptions	-4,000	-4,000
Itemized Deductions	-17,308	-17,262
Taxable Income	49,392	41,463
Tax	15,407	12,580
Credits & Withholding	-5,545	-5,545
Tax Balance Owed	9,862	7,035

Description	Value
Use Income Averaging	3
Number of Years	140
Expansion Percent	3,000
Min. Averagable Income	40,000
Year 1 Taxable Income	20,000
Year 2 Taxable Income	15,000
Year 3 Taxable Income	0
Year 4 Taxable Income	0

**Comments**  
Case 2: see effects of a) selling bond \$2000 gain, b) putting \$2250 in IRA putting \$7500 in a Keogh for Mary, c) income averaging

Figure 5: Forecast allows you to income average by entering previous years' income in the averaging window. As with all changes, the new tax liability is instantly computed. Note also the comment window, which is used to keep track of your changes and their reasons.

Account	Tax Category	Schedule
Cash	Not a Tax Item	
Credit Union	Not a Tax Item	
Home	Not a Tax Item	
Stock Savings Plan	Not a Tax Item	
Stocks & Bonds	Not a Tax Item	
Rental A	Not a Tax Item	
Rental B	Not a Tax Item	
Visa	Not a Tax Item	
American Express	Not a Tax Item	
Auto Loan	Not a Tax Item	
Mortgage	Not a Tax Item	
Mortgage A	Not a Tax Item	
Mortgage B	Not a Tax Item	
Check Interest	Interest	Interest and Divi...
Dividends	Dividends	Interest and Divi...

Tax Categories
Wages and Salaries
Taxpayer's Wages
Spouse's Wages
Interest and Dividends
Dividends
Interest
Taxexempt Interest
Business Profit-Loss
Gross Receipts
Cost of Goods
Business Deductions
Spouse Gross Receipts

Figure 6: Forecast allows you to load your Dollars & Sense data electronically through a process called "mapping". In this window are displayed both the Dollars & Sense account titles and Forecast's tax categories. To map, simply click an account title followed by a click on its appropriate tax category. Note the default setting is "Not a Tax Item", which will apply for many Dollars & Sense accounts.

### FORECAST

Monogram List Price—\$69.95

8295 S. La Cienega

Inglewood, CA 90301 (213) 215-0529

Backup Copy—Free for registered owners

Copy Protection—User created copies require Master for validation key

Returns—Free replacement for defective disk for 90 days from date of purchase; \$15 charge thereafter until one year from purchase



# The Dialog Box

By Eric Zocher

## Mac T-Shirts, etc.

**Q:** I've seen people with Mac T-shirts and beach towels; where can I buy these things?  
*Eugene Cassidy—Marshalltown, Iowa*

**A:** Many Apple dealers stock them, but they can also be ordered by mail or by phone directly from **The Apple Collection**, a division of Apple which sells Apple-labeled clothing, accessories, office products, and outdoor items. Along with the T-shirt (#5710, \$7.50) and beach towel (#771, \$23) you asked about, the **Collection** catalog lists diverse items ranging from a Macintosh lapel pin for \$2.50 (#170) to an Apple sailboard for a mere \$899 (#199). There are shipping/handling charges and sales tax in some states, so check with them before ordering. They can be reached at:

**The Apple Collection**  
P.O. Box 306  
Half Moon Bay, CA 94109  
Phone:  
800/632-7979 from California  
800/227-6703 outside Cal.

## Large Monitor

**Q:** I want to use a large monitor or projection video system to display charts for a corporate presentation—how can I interface either of these to my Macintosh?  
*Hugh Bear—Socorro, New Mexico*

**A:** As you probably have already noticed, there is no video output port on the Macintosh. Several vendors now market direct video output schemes. Most involve installing a new card in your computer and drilling a hole for the video output connector. Vendors selling video output schemes include:

**Mentaur Technologies**  
P.O. Box 1467  
San Marcos, TX 78666  
Phone: 512/396-1565  
Product: Composite Video Adapter—\$199.95  
(See their *Developer Profile* in the Premier issue of **The MACazine**)

**MicroGraphic Images Corporation**  
19612 Kingsbury Street  
Chatsworth, CA 91311  
Phone: 818/368-3482  
Product: CineMac—\$195

## Professional Data Systems

220 Redwood Highway #120  
Mill Valley, CA 94941  
Phone: 415/383-5537  
Products: Mach 1—\$1995; Mach 2—\$6495

After you've had a video output adapter installed in your Mac you'll then be faced with the formidable task of acquiring a monitor or video projector capable of handling the Mac's very high video bandwidth. An ordinary television set or low quality monitor has a bandwidth less than 4.5 MHz. A good closed-circuit monitor's bandwidth is 5 MHz to 10 MHz. The Macintosh video signal requires a hefty 20 MHz bandwidth. As you might imagine, large monitors or projectors with this capability are very expensive. A 23"25" monochrome (single-color) monitor compatible with the Mac will cost around \$1500. The most common video projection system that works with the Mac is Electrohome's EDP-57 monochrome projector. It's capable of projecting a 20-foot diagonal picture, but you won't see many of these since it costs around \$6000.

The only alternative to direct video output is to point a video camera at the Macintosh screen and show the video on a conventional monitor or projection TV. While this is cheaper than the direct route, it results in considerable loss of resolution. This alternative is really only suitable for training or product demonstrations. The quality is simply too poor for a critical application such as a corporate presentation.

## Audio Output Port

**Q:** There is a small jack on the back of my Mac labeled with a musical note icon, what's this jack for?  
*Alan Bacon—Fredricksburg, Virginia*

**A:** That jack is the Mac's audio output port. It can be used to play sounds through headphones or a stereo system. The jack accepts a monophonic (one channel) miniature 1/8" phone plug.

When anything is plugged into this audio port the internal speaker is turned off, so you may want to use this port with a pair of headphones to avoid disturbing others when using a music program or playing games with sound effects. To use the headphones from a walkman-type portable cassette player with the Mac you need to buy a mono-to-stereo adapter since the headphones are stereo and the Mac is mono. Radio Shack sells an adapter for \$1.19 (part #274-368) that will do the trick. Home stereo headphones can also be



used with the Mac with the proper adapter (Radio Shack part #274-361A, \$1.59). Be careful to have the Mac's volume on one of the lower settings when using headphones, since even the lower volume settings are very loud when heard through headphones.

If you want to demonstrate a program such as MusicWorks to a group of people, the Mac's internal speaker is not really loud enough. In a situation such as this, you may want to use the audio port to connect your Mac to your stereo system with its (hopefully) much larger and higher quality speakers. With the proper adapter, the audio output jack of the Mac can be connected to the "Aux" input of your stereo receiver or amplifier. Once again, it's Radio Shack to the rescue with part #42-2153 for \$1.89. Played through a good stereo, Mac programs that use sound can take on a whole new dimension.

## Different Versions of MacPaint

**Q:** A friend of mine said I should keep a copy of the old version of MacPaint. Should I, and why?

*Paul Moniz—Knoxville, Tennessee*

**A:** Your friend is right, you should keep a copy of version 1.0 of MacPaint. There is one situation (at least) in which the 1.0 version performs better than the newer versions.

In MacPaint 1.0 the File menu contains the Print command. In the newer versions (1.3 and 1.4) the Print command has been replaced by two commands: Print Draft and Print Final. The Print Draft command works the same as the 1.0 Print command. Print Final is a double pass printing mode that was added to the 1.3 and later versions of MacPaint. The Print Final command produces a darker and slightly sharper printout than Print Draft, but it takes almost exactly twice as long.

The "Draft" mode is adequate in nearly all circumstances. The only situation in which the "Final" mode is worth the wait is when you plan to photocopy your printout—in this case Final's darker output produces much better results.

There is another way to start a printout. From the desktop, select a MacPaint document (point at it and click), then pull down the File menu and choose Print. MacPaint is started, the document is printed, and you end up back at the desk top. This isn't much of a time saver for one file, but it can be used to print multiple files in sequence without requiring attention. This comes in very handy when you buy a new "clip art" disk and want to generate a printout of all of your new pictures. Just select all of the picture documents (hold the shift key down and click on them, one after the other), make sure your Imagewriter has plenty of paper, then choose print from the File menu. You can now go make yourself a sandwich—by the time you're finished eating, there should be a stack of new pictures waiting for you.

The above situation is best handled with MacPaint 1.0 rather than any of the newer versions. Here's why: when printing from the Finder, MacPaint 1.0 uses the "Draft" mode, while Paint 1.3 and up all use the "Final" mode. It will take twice as long to print all of your pictures and put twice the wear on your printer and ribbon. For a simple visual catalog of your clip art, Draft's quality is sufficient. □

*Eric Zocher is Vice President—Research and Development, Silicon Beach Software, San Diego, California*  
Send your questions to:

**The Dialog Box**

*Eric Zocher*

*P.O. Box 12187*

*La Jolla, CA 92037*



**The Dialog Box**

☒ Monthly

By **Eric Zocher**

**Start**

**Got a question that is driving you crazy? Here's the place to get it answered! Any topic is fair game - ranging from user oriented to hardware details to programming.**



# FEDIT 1.2

## The Macintosh File and Volume Edit Program

By David B. Alford

Original Program by John H. Mitchell

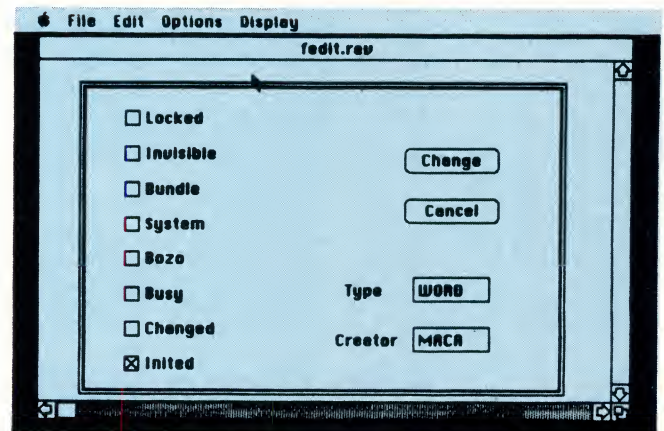
The software market for Macintosh programs has begun to pick up quite a bit of speed, of late. Many of the developers have seen fit to inundate us with many versions of Data base programs, multiple styles of word processors and editors as well as an expanding wealth of adventure type games. It is interesting to note that much of this software has stayed within a range \$50.00 to \$400.00. What is even more interesting to note is the amount of public domain and "freeware" software that is becoming increasingly available. Currently many Macintosh users are downloading software from the Compuserve network as well as obtaining disks of software from users groups throughout the country. The University of Texas Macintosh Users group is offering 10 different volumes of software for basically the cost of the disks to the group members. Much of this "freeware" has proven to be of excellent quality. In some cases it has proven to be better than the proliferating software that is being offered for sale at "reasonable prices". One such program is called FEDIT, and is written by John H. Mitchell. This is not a word processing editor or a program editor, rather it is a screen-oriented, disk block editor that allows you to view and change data on a disk that you could not get to with either of the previously mentioned programs.

I had been searching for a program like FEDIT for some time, when I came across it in one of the UMUG volumes. FEDIT is a disk block editor that allows you to view the contents of a disk in several ways. You may open the entire volume or an individual file if you wish, and view and edit the information on a disk down to the bit and byte level. This is a powerful utility that you must be very careful with, or you may find yourself in over your head with a wrecked disk that you cannot put back together. Currently, there is an altered finder that has been circulating among Mac users that was changed up using FEDIT. This finder is loosely based upon Sesame Street and Ghostbusters, with changed up icons and trite error messages that are a diversion from the originally released Finder and System.

FEDIT 1.2 has four pull down menus: FILE, EDIT, OPTIONS, and DISPLAY. When you first open the FEDIT icon you are presented with the mini-finder to select a file to open for editing. You may cancel the mini-finder at this point or open any of the files on the disk. If you open a file, FEDIT presents you with the first 255 byte block of the file in ASCII code in a window format. If you choose to cancel, you may then open the entire

disk as a volume, and view the directory information for the entire disk as well as any of the 800 blocks on a MAC disk.

The OPTIONS pull down menu allows you to view the information in ASCII only or in HEX. The HEX option does display both ASCII and HEX in a side-by-side format. Under the EDIT pull down menu, you may go




into the ASCII or HEX modify mode, which puts an additional flag up on the menu bar to notify you that you are in the editing mode, and to remind you to proceed with caution. The program has keyboard commands for every pull-down menu option, and is one of the best examples of a program written using the Macintosh interface available. The EDIT pull down menu also offers you the capability to do ASCII or HEX searches for information that is resident on the disk. You may repeat a search for multiple occurrences of the search string, as well. Once you have found and read in a block of information and modified it, the information does not become updated on the drive until you write it back to the disk. You are given one last chance to undo any changes with the UNDO CHANGES command that is another option of the EDIT pull down menu.

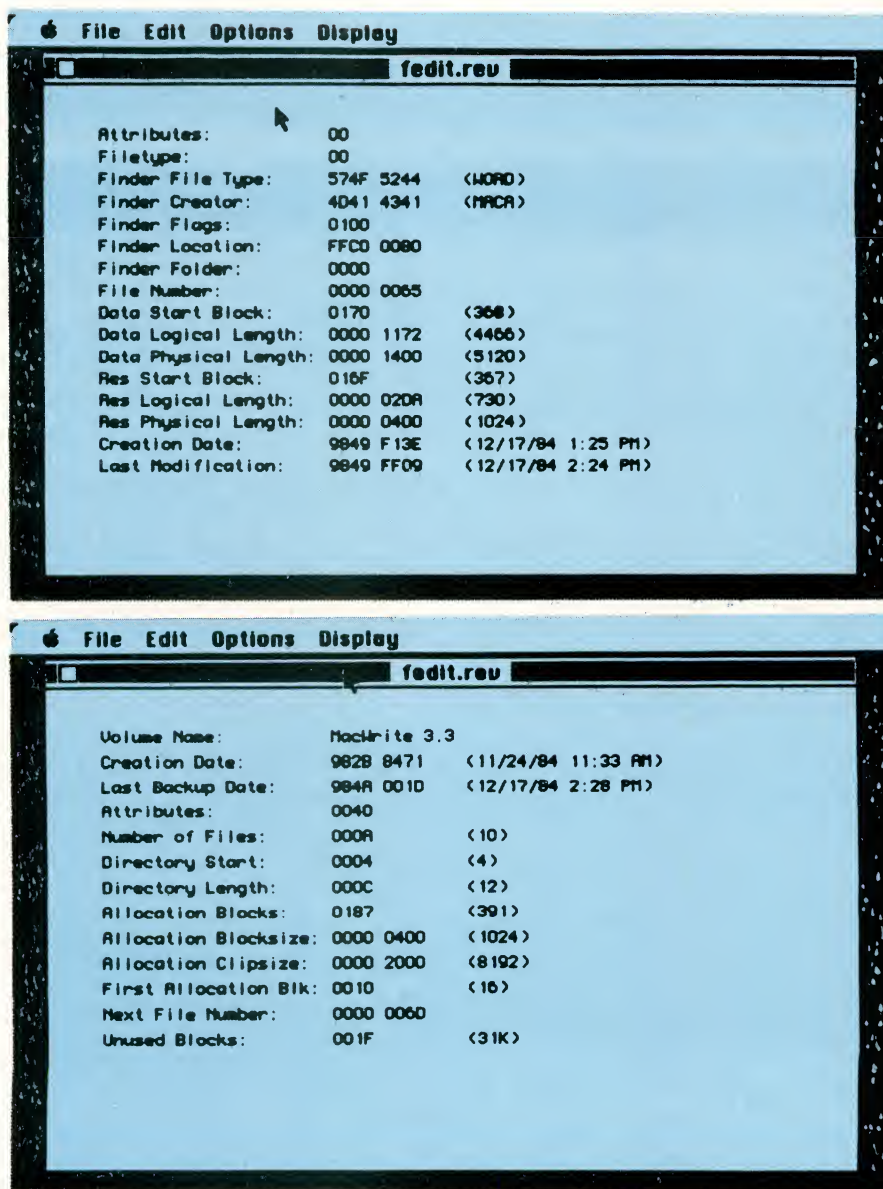


If you have chosen to edit a particular file, the OPTIONS menu gives you the ability to view the Data fork or Resource fork of that file. The DISPLAY pull down menu allows you to view the Disk Header Information, the File Header Information and the File Finder Attributes for a selected file. The Finder Attributes for a file are shown in the File Header Information window when it is selected. You must choose the File Finder Attributes selection to be able to edit and change these attributes. You may change the attributes of a file as if you were using the utility SETFILE. This utility is part of a group of disks called MACSTUFF that was originally given out only to certified Apple developers. John Mitchell has incorporated the SETFILE capabilities into his FEDIT program. You are allowed to change bits in the file header that indicates to the finder the status of the file for the following attributes: Locked, Invisible, Bundle, System, Bozo, Busy, Changed or Init'd. A full discussion of the file attributes can be found in the book *Inside Macintosh* published by Apple. Several of these bits have been used in file protection schemes to keep users from copying or duplicating entire disks.

SETFILE or FEDIT 1.2 allows you to alter these bits, which change the file attributes.

The File Finder Attribute window also shows the type of file and the program that originally created the file as well as allowing you to edit them. The file types and creators are presented in a 4 letter abbreviated code that is also outlined in *Inside Macintosh*. I strongly suggest reading this information before you make any changes to any of the fields or attributes in the File Finder Attributes window.

FEDIT is a very advanced utility that has many capabilities. As I warned earlier, great care should be exercised when using this program to keep from wiping out a disk. This can be done by wiping out the directory, or writing over or deleting file pointers or modifying the system in such a way that it does these things for you. Knowing what you are doing, and keeping a good backup of the disk that you are modifying are the only insurance that you will not lose data. Good Computing! 








# MAC-CETERA

## More hidden characters in Cairo font

Cairo has two more hidden characters that may be of interest to some Macintosh users. To see these characters first choose the **Cairo** font and also **18 point** size. The first character is obtained by holding down the **OPTION** key then hitting the "n" key **twice**.

You should get this: 

The second hidden character can be obtained by holding down the **OPTION** and **SHIFT** key while striking the "a" key.

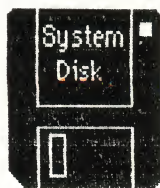
You should get this: 

## LOCKING THE DISK

Disks can only be locked using the tab on the diskette. Disks cannot be locked using the **GET INFO** box. Locking the disk will insure your disk is not erased or documents deleted accidentally. Remember also that any documents left in the **TRASH CAN** while opening an application or document will be erased without warning (You will not be required to select **EMPTY TRASH** from **SPECIAL** menu).



Unlocked



Locked

## Rolofile can be used with MacWrite

The data file used by the Public Domain application **ROLODEX** can be edited by MacWrite. You can move Rolodex and Rolofile to disk containing MacWrite. Then Open MacWrite and close it, now choose **Open...** from the **EDIT** menu. You should see the Rolofile in the files you can open for editing.

This may be used for those who have MegaMerge to create a data file or use the data file to make mailing labels from MacWrite.

## CHEAP "MAC" BAGS

If you want to save the money, give up all that extra weight padding, and can use a cheaper (much cheaper) Macintosh bags look into a **Back-Pack** bag made by **OUTDOOR PRODUCTS** (#228). It measures 13" deep x 8 1/2" wide x 16" height, with a padded bottom. The bag can hold the Mac, keyboard, mouse and necessary manuals. These bags can be found at most camping supply stores, and sporting goods stores. Prices should be under **\$30.00 each**.

## SAVING MacPAINT DOCUMENTS

If your MacPaint (Version 1.3) session is interrupted (by power loss, for example, or by the reset/interrupt switch), some or all of your work may be recoverable. MacPaint maintains a working copy of your document in temporary files **Paint 1** and **Paint 2**, which contain the current window and full page, respectively. Every time you move the window with the grabber (hand) or choose the **"SHOW PAGE"** option, MacPaint updates these files. After an interrupt, these files remain on the disk and can be used to recover

your work as follows:

After rebooting, select **MacPaint** and one or both of the temporary files (**Paint 1**, **Paint 2**). Choose **OPEN** from the **FILE** menu. You should now be back in MacPaint with your document recovered under the name **"RESCUE"**. Save it under another name before leaving MacPaint, or it will be deleted.

## Using the constraint key while in SHOW PAGE

The constraint key is the **SHIFT** key. It is used mostly to move lines or figures straight up and down or from left to right in MacPaint. You may use the **SHIFT** key also when you are moving the active screen in Show Page from one area to another. This can also move complete pictures straight vertically or horizontally in the Show Page screen. This constraint key is helpful to center drawing without fear of inaccuracy due to a shaky hand. Remember that any part of the drawing that is left outside the 8 1/2 x 11 sheet will be deleted when you select **OK** on the Show Page screen.

## Using the TAB key more often

The tab key can help you to work faster if you are using the keyboard to work on files and would prefer not to move to the mouse to select items. For example, when you are using the **Print...** menu in MacWrite or Microsoft Multiplan, the **TAB** key can be used to move the selection from **Page Range From** and **To** to **Copies** and back around. In Microsoft Multiplan the tab key can be used to move within the **Page Setup...** menu. You can move from **Page Header** to **Page Footer** and to the **four margin** boxes. This is a



standard feature of the Macintosh that lets the user move within the Alert and Dialog boxes that requires entries that are not like click-on/off buttons. Try it, you will like the short cut.

## What you see is not always what you get!

One of the characters in Geneva fonts printed in high and standard quality is not the same. Since printing a document in high quality requires twice the point size font that is being printed. One letter differs in Geneva between 12 and 24. The larger size (24 point) uses an upper-case subscripted "Y", whereas, the smaller size (12 point) uses a lower-case "y". Try this out by printing out a document that uses Geneva 12 point lower-case "y". Print the document in both high and standard quality. You should see that the lower-case "y" is printed in standard and an upper-case subscripted "Y" in high quality.

Parimal Jobanputra  
Philadelphia, PA

## System Errors

**I/O System Errors**—These are operating system or hardware related errors. They are not related to your software. Contact your dealer for assistance.

System Error 17 -Control Error.  
System Error 18 -Status Error.  
System Error 19 -Read Error.  
System Error 20-Write Error.  
System Error 21 -Bad Unit Error.  
System Error 22-Unit Empty Error.  
System Error 23-Open Error.  
System Error 24-Close Error.  
System Error 25-Tried to remove an open driver.  
System Error 26-Driver install couldn't find driver in resource file.  
System Error 27-I/O call aborted by Kill I/O.  
System Error 28-Couldn't rd/wr/ct/sis cause driver not opened.

**File System Error Codes**— The recommended solution is listed after each message.

System Error 33-Directory is full. Transfer the file to a new disk or erase unnecessary files from the current disk.  
System Error 34-Disk is full. Transfer the file to a new disk or erase unnecessary files from the current disk.  
System Error 39-End of File. Run Restructure Order.  
System Error 35-Can't locate correct disk. Check to see if there is a colon in the filename. If there is, reenter the filename.  
System Error 36-I/O error. Hardware related. Contact your dealer for assistance.  
System Error 38-File not open.  
System Error 40-Tried to position to before start of file (r/w).

System Error 41 -Memory full (open) or file won't fit (load).  
System Error 42-Too many files open.  
System Error 43-File not found.  
System Error 44-Diskette is write protected.  
System Error 45-File is locked.  
System Error 46-Diskette is locked.  
System Error 47-File is busy (delete).  
System Error 48-Duplicate file name (rename).  
System Error 49-File already open with permission.  
System Error 50-Error in user parameter list.  
System Error 51 -Refnum error.  
System Error 52-Get file position error.  
System Error 53-Diskette not on line (was ejected).  
System Error 54-Permission error (on file open).  
System Error 55-Drive volume already on-line at Mount Vol.  
System Error 56-No such drive (tried to mount a bad drive number).  
System Error 57-Not a Mac diskette.  
System Error 58-Volume in question belongs to an external fs.  
System Error 59-The old entry was deleted but could not be restored.  
System Error 60-Bad master directory block.  
System Error 61 -Write permission error.

**Disk, Serial Ports, Clock Specific Errors**—These are operating system or hardware related errors. Contact your dealer for assistance.

System Error 64-Drive not installed.  
System Error 65-Read write requested for an off line drive.  
System Error 66-Couldn't find 5 nibbles in 200 tries.  
System Error 67-Couldn't find valid address mark.  
System Error 68-Read verify compare failed.  
System Error 70-Bad address mark bit slip nibbles.  
System Error 71 -Couldn't find a data mark header.  
System Error 72-Bad data mark checksum.  
System Error 73-Bad data mark bit slip nibbles.  
System Error 74-Write underrun occurred.  
System Error 75-Step handshake failed.  
System Error 76-Track 0 detect doesn't change.  
System Error 77-Unable to initialize IWM.  
System Error 78-Tried to read 2nd side on a one sided disk.  
System Error 79-Unable to correctly adjust disk speed.  
System Error 80-Track number wrong on address mark.  
System Error 81 -Sector number never found on a track.  
System Error 85-Unable to read same clock value twice.  
System Error 86-Time written did not verify.  
System Error 87-Parameter ram written didn't read verify.  
System Error 88-InitUtil found the parameter ram uninitialized.  
System Error 89-SCC receiver error (framing, parity, OR).  
System Error 90-Bread Received (SCC).

**Scrap Manager error codes.**  
System Error 100-Not scrap exists error.  
System Error 102-No object of that type in scrap.

**Storage allocator error codes**—These are operating system or hardware related errors.

System Error 108-Not enough room in heap zone.  
System Error 109-Handle was NIL in HandleZone or other.



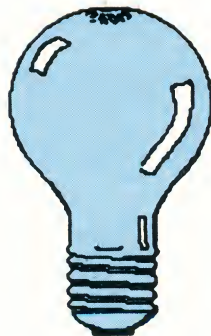
System Error 110-Address was odd or out of range.  
 System Error 111-WhichZone failed (applied to free block).  
 System Error 112-Trying to purge a locked or non-purgable block.  
 System Error 113-Address in zone check failed.  
 System Error 114-Pointer Check failed.  
 System Error 115-Block check failed.  
 System Error 116-Size check failed.

Resource Manager error codes—These are operating system or hardware related errors. Contact your dealer for assistance.


System Error 192-Resource not found.  
 System Error 193-Resource file not found.  
 System Error 194-AddResource failed.  
 System Error 195-AddReference failed.  
 System Error 196-RmveResource failed.  
 System Error 197-RmveReference failed.

ID Errors—Font changes, a drastic slowdown in the program operation, and the following error messages indicate memory problems. If it is possible, exit the program and restart.

ID 02 -Address error.  
 ID 03 -Illegal instruction error.  
 ID 10 -Line 1111 trap error.  
 ID 11 -Misc. hardware exception error.  
 ID 15 -Segment loading error.  
 ID 25 -Out of memory.



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# "Basic" "Basic"

## MICROSOFT 2.0 BASIC

Microsoft 2.0 BASIC is a language worthy of the Macintosh: sophisticated, yet easy to use. However, while you very well may have started using the Mac with no prior computing experience and only a glance at the documentation, that does not mean you can get the most out of BASIC the same way.

If you are new to the Macintosh, or new to BASIC, or both, you might be interested in a continuing column in The MACazine on BASIC programming: the only way we'll know is if you write and tell us.

What is in the works is a series of tutorials on BASIC in the beginner-intermediate range, based on and combined with a question-answer segment. If you supply the questions, I'll find the answers. The questions may be on a specific programming problem (Why didn't this work? Is there a shorter way of programming this routine? Why won't this run? What does that error message mean?) or about a more general programming technique (What are sequential files? How do the graphic GET and PUT statements work? What is the advantage of WHILE-WEND loops? How do you use VARPTR with ROM calling?) You can supply the questions in one of two ways: write to MACazine, or use your modem to call the electronic bulletin board at 201-875-2635, and leave the question for me there.

While we wait for reader reaction to this proposal, why don't you exercise your mouse? The following is an excerpt from the forthcoming book *Microsoft BASIC on the Mac: A Beginner's Guide*, from Scott, Foresman Publishing.

## THE MOUSE FUNCTION

MSBasic has a versatile MOUSE function: it can be used with any of seven arguments (0 through 6), letting you keep track of both the position of the mouse cursor on the screen and the button "status".

The MOUSE(0) function serves two purposes: one is as the general "mouse call" that sets the value of all the other MOUSE functions.

Just as the INKEYS function checks the keyboard as soon as the keyword appears in the program, MOUSE(0) makes the computer check the mouse. Both the position of the mouse cursor on the screen and the current status of the button are checked; the cursor position and button status are stored in the computer's memory and can be accessed by using other arguments with the MOUSE function. In addition to keeping track of the cursor and button positions at the time MOUSE(0) is used, other parts of the MOUSE function keep track of what has happened since the last time MOUSE(0) was "called".

## BUTTON STATUS

MOUSE(0) is the basic "function call", as explained above; in addition, it stores a number that represents the button status. In the following list, the phrase "since the last call" means since the last time MOUSE(0) was used.

The MOUSE(0) function will return a number from -3 to 3, representing the following situations:

- 0 means the button is not down, and has not been down since the last call.

- 1 means the button is not down, but there was a single click since the last call.
- 2 means the button is not down, but there was a double-click since the last call.
- 3 means the button is not down, but there was a triple-click since the last call.
- -1 means the button is down, and this is the first time it went down since the last call.
- -2 means the button is down, and there was also a click since the last call, preceding the current press.
- -3 means the button is down, and there were two clicks since the last call, preceding this current press.

As you can see, the returns from the MOUSE(0) function for button status can be divided into two general categories: the button is currently down, or it is not. Subdivisions in each category allow you to determine what else happened with the button since the last "call"—the last time MOUSE(0) was used.

This brief program will wait for the mouse button to be pressed, then acknowledge the click:

```
loop:
IF MOUSE(0)=-0 GOTO loop
Print"Click"
```

This routine is similar to an INKEYS loop: when MOUSE(0)=0, the button is not down, and as long as the button is not down, the computer stays in the loop.

*continued on page 52*



# Basic" Basic"

By Sharon Zardetto Aker

## MacBasic

You are going to have to wait a little longer for the long-awaited MacBASIC from Apple: the latest plan is a release date at the end of March. Is it worth the wait? You can be the judge of that.

Let me throw a few new keywords at you: ANNUITY, COMPOUND, REMAINDER, TICKCOUNT, BTNWAIT, ROUND, UPSHIFTS, DOWNSHIFTS. Use your imagination—there's not enough room here to describe everything in MacBASIC. Here, though are some of the highlights:

### Labels

MacBASIC, like Microsoft's 2.0 BASIC, has "optional" line numbers. Command lines can be left "bare", or given a line number or a label. A line number, however, acts as a label; lines are executed in order of appearance, not numerically. As each line is entered in a listing, the keyword is printed in boldface for easy reading. These two features are nearly the only thing the two BASICS have in common.

### Semi-Compiled and Pseudo-Code

The BASIC computer language is an interpreted language; that is, the computer looks at one command at a time and translates each line of "code" into the numeric language ("machine language") that it can understand. Every time you run a program, the piecemeal translation occurs again. One of the traditional complaints against BASIC is that it is so slow, and it is this translation process that causes the slowness.

A compiled computer language, however, is one that can be translated entirely into machine language before a program is run; as a result, the program runs much faster.

MacBasic is "semi-compiled": as you enter each program line, it is translated into a more compact "pseudo-code"; these translated lines are the ones the computer looks at when the program is running. Turning the pseudo-code into machine code is done much faster than interpreting the BASIC code.

Directly related to this semi-compilation feature is MacBASIC's levels of syntax checking. As you enter a line and the compilation takes place, a syntax error (missing quotation marks, misplaced commas, etc.) will be caught, and you will be alerted. On the next level—when you run the program, but before it is executed—errors such as incomplete control structures (FOR without NEXT, WHILE without WEND) are caught. Finally, there are the run-time errors that will be caught when the program is actually running.

### Decisions, Decisions

MacBASIC has a plethora of control and branching structures. By far the most interesting is the SELECT CASE construct.

For this structure, you select a variable (numeric or string); its value will determine which command is executed next:

```
SELECT weight
CASE < 120
    PRINT "Wasting away"
CASE 120 to 170
    GOSUB check.height
CASE 170 to 200
    GOTO health.club
CASE > 200
    CALL stop.eating
ENDSELECT
```

In a more standard BASIC, such a routine would have to be written:

```
IF weight<120 PRINT "Wasting away"
IF weight>119 AND weight < 169 GOSUB check.height
```

and so on.

### Multiples

MacBasic lets you write multiple-line IF-THEN statements:

```
IF a<b THEN
    PRINT "This"
    GOSUB "That"
    CALL "the.other.thing"
ENDIF
```

*continued on page 53*



## MOUSE POSITION

MOUSE functions 1 through 6 return the coordinates of the position of the mouse cursor (the very tip of the arrow); these coordinates are horizontal and vertical coordinates such as those used with PSET and PRESET.

- MOUSE(1) and MOUSE(2) return the horizontal and vertical coordinates of the mouse cursor according to its position at the time of the MOUSE(0) call.
- MOUSE(3) and MOUSE(4) return the horizontal and vertical coordinates according to the cursor's position at the time of a button press that preceded the MOUSE(0) call.
- MOUSE(5) and MOUSE(6) return the horizontal and vertical coordinates for where the mouse was at the time of the MOUSE(0) call if the button was down at the time of that call. If the button was up at the time of the call, these functions return the coordinates for where the mouse was when the button was released.

As you can see, MOUSE(1) and MOUSE(2) store the current (at the time of the call) coordinates of the mouse cursor; the other MOUSE position-checkers are utilized, in conjunction with MOUSE(0) for button status, for such things as "drag" operations. For instance, if MOUSE(0) returned a -2, indicating that a click preceded the current press, you might want to check MOUSE(3) and MOUSE(4) to see where the cursor was at the time of that click.

This program will wait for the mouse button to be pressed, then print the coordinates of the mouse cursor at the time of the click:

```
loop:IF MOUSE(0)=0 GOTO loop
PRINT MOUSE(1),MOUSE(2)
STOP
```

You can continue the "coordinate reading" by replacing the STOP with a "GOTO loop" statement; however, you will find that each pair of coordinates is printed a number of times, because you cannot get your finger off the mouse button fast enough for it only to register once.

Instead, to continually read coordinates, you can add a line that will keep the computer looping until you take your finger off the button:

```
loop:IF MOUSE(0)=0 GOTO loop
PRINT MOUSE(1),MOUSE(2)
stay:IF MOUSE(0)<0 GOTO stay
GOTO loop
```

The "stay" loop checks if the button is down—whenever MOUSE(0) returns a negative number, the button is down—and the computer loops there until the button is released.

## MOUSE PROGRAMS

Here are two programs that check for a button press and register the current mouse position: feel free to enhance, embellish, and otherwise alter them as you experiment with the MOUSE function.

This first program lets you click at any three spots on the screen; a dot will appear where you click, and after all three clicks are made, lines are drawn to connect the spots.

```
OPTION BASE 1
DIM c(6)
FOR n=1 TO 3 STEP 2
  loop: IF MOUSE(0)=0 GOTO loop
  PSET(MOUSE(1), MOUSE(2))
  c(n)=MOUSE(1):c(n+1)=MOUSE(2)
NEXT n
```

```
LINE(c(1),c(2))-(c(3),c(4))
LINE(c(3),c(4))-(c(5),c(6))
LINE(c(5),c(6))-(c(1),c(2))
STOP
```

## Program Notes

An array is dimensioned at the beginning of the program to store the three pairs of coordinates that will be registered during the program.

A "mouse loop" keeps the computer waiting for the button to be pressed; when it is clicked, the current coordinates are PSET to mark the spot on the screen. MOUSE(1) and MOUSE(2), which store these current coordinates, are used as the PSET arguments.

The current coordinates are also stored in two successive elements of the array; the program then loops back if all three positions have not yet been clicked. The loop uses STEP 2 because the first pair of coordinates are stored in c(1) and c(2); on the second loop, the first coordinate goes into c(3); on the last loop, the first coordinate goes into c(5).

The second section of the program uses the coordinates stored in the array to draw lines; the final line is drawn from the last spot back to the first.

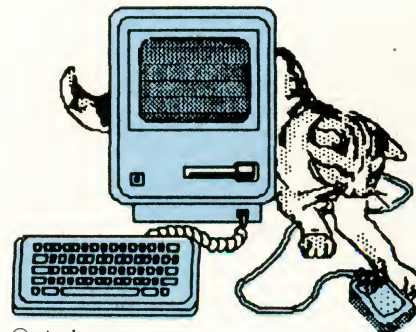
This next program allows you to "draw" on the screen with the mouse cursor; drawing in the upper left quarter of the screen will cause pixels to be set there, and echoed in the other three quadrants, as well. Clicking in the extreme lower right corner of the window will end the program.

```
loop: IF MOUSE(0)=0 GOTO loop
a=MOUSE(1):d=MOUSE(2)
IF a>475 AND d>240 THEN STOP
IF a>245 OR d>125 GOTO loop
PSET (a,d): PSET STEP(245,0)
PSET STEP(0,125):PSET STEP(-245,0)
GOTO draw
```

## Program Notes

The basic drawing routine is an endless loop that PSETs the mouse coordinates as long as the button is down; then, with the offset option, corresponding points are PSET in the other quadrants of the screen.

The two IF statements check the mouse coordinates before they are PSET; if the coordinates show that the cursor is in the lower right corner, the program stops. When the cursor is found to be outside the drawing quadrant, the computer loops back to check the new mouse coordinates without PSETting the "illegal" ones.



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You can also insert multiple-line ELSE clauses in this structure.

Another construct which is normally limited to a single line in BASIC but is a multi-line construct in MacBASIC is that of defined functions.

## Graphics

MacBASIC is a whiz with graphics; most words that you might be familiar with as ROM routines are keywords here; so, instead of "CALL FRAMEOVAL", the command is FRAMEOVAL. The advantage is that the parameters you want to use to describe the size/position of the oval can be simply listed after the keyword. To use such parameters with a ROM routine, you would have to store them in an array, and use the VARPTR command to let the computer know where you have them stored.

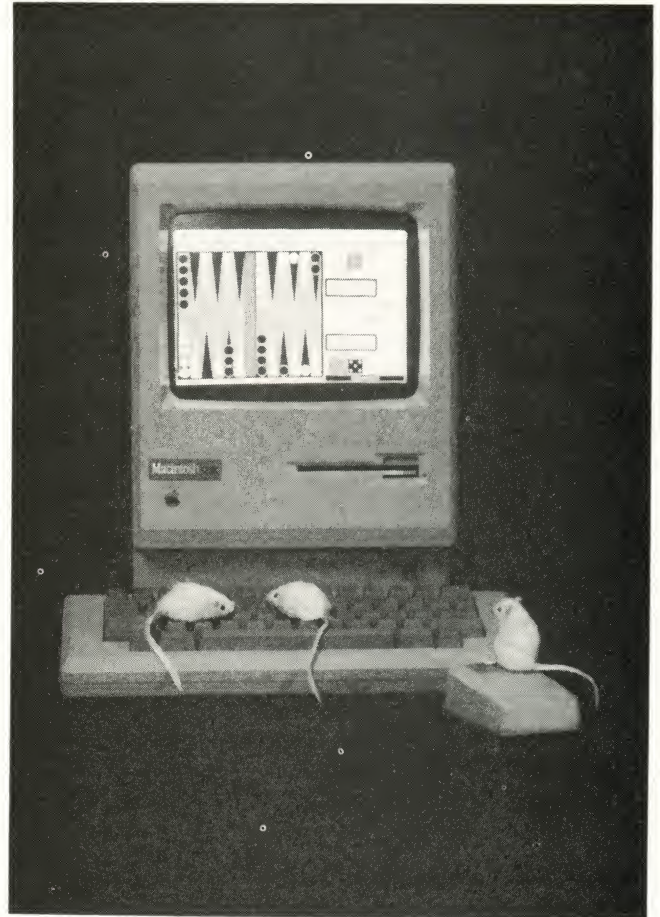
Of special interest here is SET PATTERN option; each of the familiar MacPaint patterns has a code number that you can refer to. Once the pattern is set, shapes can be painted with that pattern. As an extra, black, white, and three shades of grey can be specified by name instead of number!

## Pros and Cons

This is not a review of MacBASIC; it's not even a thorough description, since that would take the whole magazine. It was meant to whet your appetite. But, for those of you who are wondering about possible flaws: sure, they're there. Chief among them is the lack of immediate command ability. After all, the difference between an immediate command and a program command is the line number, and MacBASIC doesn't need line numbers. You must open another window as if for a separate program, type in the command, and run it. Another annoying thing is that a printed listing can only be done in draft quality. The SOUND commands, very different from MSBASIC, are not any friendlier: who among us thinks in frequencies when it comes to music? The most obvious complaint of all is the lack of commands that will allow control of windows, menus, mouse, etc. But wait...

## Secrets

This is a strange situation: type the word "toolbox" in MacBasic, and it will be emboldened like any other keyword. Aha! If you can get into the toolbox, you can do anything. Apple is not actually keeping this a secret, but neither are they going to document it. Stay tuned, folks. When MacBasic is released (so you have something to work with) I'll document some of the toolbox routines for you. In the meantime, feel free to write to me, or to The MACazine, with your comments and questions. ■





# SofTech MicroSystems, Inc.

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## Designer Series for the Macintosh, Advanced Development Toolbox & MacAdvantage.

by Stephen J. Hyland  
AdaSoft, Inc., Lanham, Md.

As a programmer, I purchased my Macintosh primarily for use as a software development tool. However, until recently, developing software required access to a Lisa if one wished to develop compiled software. In my work, I use Ada, however, I have also used Pascal, Cobol, Fortran and Assembly.

In my survey of development systems for the Mac, I looked at all the available languages and rejected most of them. I have never liked Basic, and MicroSoft Basic is interpreted, anyway. Nor do I enjoy working with Assembly, although I realize its usefulness and am able to code in assembly when necessary. While "C" and Forth are compiled languages, I do not wish to learn a new language, especially those close to my primary languages, Ada and Pascal.

Since I already knew Pascal well, I chose to order the UCSD p-System from SofTech. This system looked as if it might fulfill my requirements for a compiled language with which I could develop (hopefully) marketable software. I am happy to say that, with some limitations, SofTech has fulfilled my expectations.

SofTech has been shipping the p-System for the Macintosh since October. At the time I placed my order, they had available three packages: the **Designer Series Pascal Development System**, the **Designer Series Fortran-77 Development System**, and the **Advanced Development Toolkit**. The Pascal/p-System package comes with a bootable p-System disk, a non-bootable disk containing the compiler, utilities, and libraries, and extensive documentation, which I'll discuss later. It also contains interfaces to QuickDraw and an interface to configure the serial port (MacConfig). The Advanced Development Toolkit contains a 68000-assembler and linker, symbolic debugger, native code generator, application interfaces, and some tools for program analysis. Documentation for all of this is provided, however, you will need some supplemental references for the

68000. I recommend *68000 Assembly Language Programming* by Kane, Hawkins & Leventhal, especially if you are not a highly experienced assembly programmer, and the *M68000 16/32-Bit Microprocessor Programmers Reference Manual* from Motorola.

For those who are unfamiliar with UCSD Pascal and the p-System, the compiler generates an intermediate code (p-code), which is then interpreted at run-time by the operating system. This requires that whatever system running the program be running under the same operating system. The p-System operating system is often referred to as the "p-machine"; that is, the operating system is actually a pseudo-machine which interfaces between the hardware it is running on, and the software it is running. The advantage of this is that an application written in the UCSD version of Pascal or Fortran is transportable and should run on any machine running under the p-System, as long as the application remains strictly within the definition of the UCSD standard. The disadvantage of this, from a developer's standpoint, is that the application can only be sold to those who have the p-System on their machine, or the developer must provide a bootable system with the application. P-code will also run a bit slower than a completely compiled application; however, it is my opinion that if speed is of the essence, you should probably code in Assembly. Most users will not notice much difference in speed in applications. SofTech does provide a way of producing faster code with their native code generator; however, native code will occupy more space, and the application will also not be completely in native code. Interfaces with ROM procedures will be in p-code.



The documentation provided is in four volumes: Operating System, Internal Architecture, Program Development, and Application Development. A copy of *The UCSD Pascal Handbook* by Clark & Koehler is also provided, and those unfamiliar with UCSD Pascal as well as those who are experienced with it will find this book helpful. For those who are new to the UCSD p-System, I also recommend purchasing *Introduction to the UCSD p-System* by Grant & Butah. The documentation provides a wealth of information about UCSD Pascal, and about the p-System. It is, however, limited in its coverage of Macintosh internals, and not a substitute for *Inside Macintosh*. What you are provided with is sufficient for programming on the Mac. Source code is given for the Quickdraw interface and the MacConfig interface, as well as a sample program using QuickDraw.

The system runs its own operating system, as mentioned earlier. When you boot, the prompts and commands bear no resemblance to that friendly Macintosh interface, and you might as well get your mouse out of the way. Since this is the case, you might wonder about the usefulness of the p-System, but keep in mind, the p-System has been around for a while, and the operating system is well proven. The utilities are pretty standard—editor, filer, etc. and are easy to use. The extensions to "standard" Pascal are very useful, and these include the ability to perform multi-tasking. I do not know what the efficiency is of multi-tasking on the Mac, but the ability is there, and I certainly intend to experiment. Bear in mind, p-System volumes and files, and Macintosh files are completely non-existent to each other, at least in these packages. Also, the **PBoot** application on the MacBoot disk is copy protected. However, you can get a back-up of this from SofTech for five dollars. All else is copyable to other disks, and once you boot the operating system, you can run programs on any disks without keeping the boot disk in the drive. You will have to re-insert the boot disk when you halt the operating system.

**MacAdvantage**, however, is a horse of a somewhat different color, and since its arrival, this is primarily what I have been using. It is exactly what I was looking for in a development environment. MacAdvantage comes on two disks, neither of which are copy-protected. The documentation for this not only supplements the documentation for the p-System, it makes a good companion to *Inside Macintosh*. This is completely a Macintosh environment and is run separately from the other p-System software I mentioned. In fact, if it is your intention to develop exclusively for the Macintosh, you do not need to purchase anything else from SofTech.

Disk 1 is a bootable disk containing the UCSD Pascal compiler, an editor, several libraries, the p-machine, and several utilities. It also contains a file called Empty Program that contains the standard program resources. Disk 2 has a resource compiler, a librarian, a debugger, an error-handler, the code for the interfaces to the ROM routines, and a sample program that runs a Macintosh application. With these, you can write Macintosh programs using all of the ROM calls. You also have access to the extensions to Pascal found in UCSD Pascal.

Typically, you will enter your program using the editor, which functions similarly to MacWrite. You must also create a resource file for any resources you will use in your application. Next, you compile your resource file using RMaker. Once this is completed, you click on the compiler icon and the code will be compiled into p-code. The compiler prompts you for the

filename, output filename, resource filename, and the listing filename. In testing the compiler, I found it compiled the test program at a rate of 498 lines per minute. After your program has compiled, you use the Set Options application to point to the locations of the Pascal Runtime library, the Mac Library, and the p-Machine. Other choices on this menu allow you to set various startup options such as a default window and some debug options, and to set the finder bundle bit which puts the application icon on the desktop. Finally, you can run your application, and debug it if it doesn't work. I have not used the debugger yet, but with this you can do all of the normal debug operations such as single-stepping and setting break-points, and examining and patching memory, as well as some unusual things like performance monitoring either on your Mac, or by hooking up another computer either directly or over a modem. The other facilities MacAdvantage gives you are a Librarian to create and maintain libraries, and an Error-handler that does a number of things, including allowing you to create custom error handling routines.

Once you've compiled and debugged your application, you can put it on a bootable disk. All you need beside your application are the Pascal Runtime and p-Machine applications, and the system folder with whatever you need in there. I found this to be one of the most exciting parts of MacAdvantage.

The documentation for MacAdvantage, extensive as it is, should be viewed as a supplement for *Inside Macintosh*. SofTech has provided the source for all the interfaces to the ROM, but explanations of the calls are minimal. A rewrite of *Inside Macintosh* is not their intention. What they do provide is clear documentation on the use of MacAdvantage and its utilities, an overview of UCSD Pascal which primarily points out its differences from non-Macintosh versions, and some good chapters on Macintosh interfaces, resource file creation, managing memory and p-Machine architecture. It's rounded out by the appendices which contain the ROM interface source code, error listings, and p-Code listings.

If you want my opinion, I think it's quite a deal. But this software is not cheap, and if your intention is to have a Pascal you can play with, by all means, buy MacPascal instead. However, if you are a serious software developer, MacAdvantage is something to consider. And, if you also want to develop software for the p-System market, consider purchasing the whole nine yards.

The Designer Series UCSD Pascal	195.00	\$
MacAdvantage: UCSD Pascal	295.00	\$
Advanced Development Tool Kit	250.00	\$

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Hardware: Macintosh 128K or 512K, second drive recommended. Designer Series also available for Apple //e.

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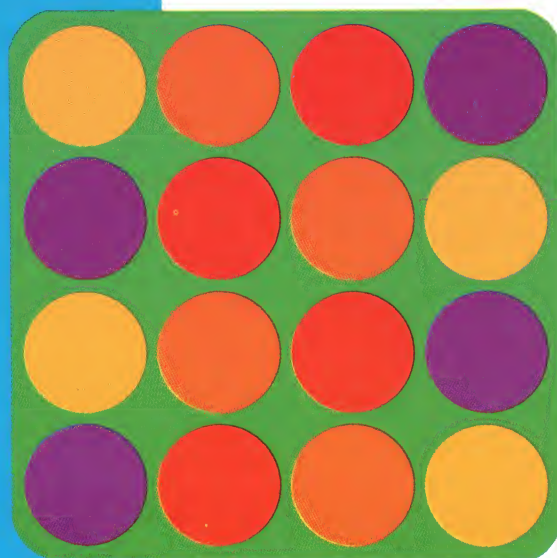
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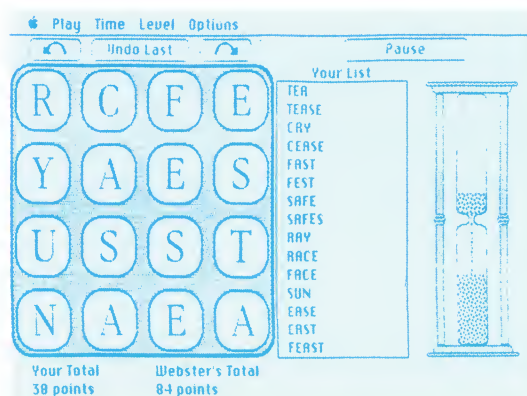
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The "In-venu" inventory software program designed for Macintosh users provides small businesses with a completely computerized method for tracking inventory on a daily basis. The system generates reports such as price lists and re-order lists, adds purchases to inventory, subtracts sales from inventory, and tracks floor planned items . . . all without costing you a fortune in hardware or in training of personnel.

#### SYSTEM CAPABILITIES INCLUDE:

- Printing status reports
- Printing price labels
- Printing invoices
- Printing price lists
- Printing monthly sales summaries
- Tracking floor planned items
- Printing re-order lists

The "In-venu" system includes one Inventory Master Diskette (which contains the programs) one Inventory Data Disk (which contains sample files), and a training manual with user documentation. Technical Support is also offered with the system.

#### SYSTEMS REQUIREMENTS INCLUDE:

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APPLE Imagewriter™ printer

APPLE external disk drive for the Macintosh™  
Microsoft BASIC™ from Microsoft Corp.

#### "IN-venu" SOFTWARE COSTS:

**\$395.00** with Microsoft BASIC™    **\$295.00** without Microsoft BASIC™

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